

# Mastering Business Analysis Standard Practices

Seven Steps to the Next Level  
of Competency

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## PREFACE

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### *Why this book now?*

You may be asking yourself questions like:

- “Another book on business analysis?”
- “In a world of ever-increasing change and mounds of information, is this book worth my time?”

*Here is what makes this book different from other books on business analysis:*

- Addresses the expansion of business analysis:
  - Levels of business analysis—many organizations are establishing business analysis as a recognized profession that can be utilized to enhance the organization’s success. In order to provide an environment that supports retention of business analysis practitioners, organizations are providing a multi-level business analysis career path. This book will address work done at both tactical and strategic levels.
  - Expansion of problem/opportunity perspectives—because of the wicked (more than complex) problems or the novelty of opportunities that organizations encounter in today’s market, business analysis practitioners are expected to broaden their perspective of the initiative space. This book will help fill this gap that the business analysis practitioner is seeking.
- Addresses collaboration points with project management—this book provides a guide to *doing business analysis*, not a guide to *doing project management*. Certainly, there are other books about each of these subjects; however, this book will note the intersection points between the business analysis practitioner and the project management practitioner. Successful solutions result when these two roles work together.
- Addresses collaboration points with solution providers—we find the support that business analysis practitioners provide to solution providers is lacking in most business analysis books.
- Provides a structured approach in the form of a process—there is no silver bullet or any one way to perform business analysis; however, this book provides a step-by-step approach that any business analysis practitioner could follow, rather than having to piece the process together for themselves. Granted, this book provides more breadth than depth into some topics, but your appetite can be quenched with further exploration on individual topics.

- Provides a way to cement your learning and provide you with the confidence to put the process into action. The supplemental *Mastering Business Analysis Standard Practices Workbook* is available for purchase, complete with exercises for a case study project in which you can practice what you read.

## SCOPE OF THE BOOK

This book is designed to represent good standard practices for performing business analysis work across seven steps, five perspectives, and 74 techniques. However, on any project there is never enough time to do everything related to business analysis so it is beneficial to know common accepted practices. The intent is to deliver the breadth of business analysis. The depth or deep dives of business analysis knowledge areas, domains, techniques, perspectives, tasks, processes, etc., are out of scope for this book. The primary focus is on the intricacies for the role and work that the business analysis practitioner contributes on initiatives. It will help the relatively new or junior business analyst develop and master the next or intermediate level of capability and competency in business analysis. For those looking for deeper dives on business analysis, this book serves as an appetizer to entice the reader to learn more, thereby advancing their career and role to a more senior level.

## FOUR KINDS OF READERS

This book appeals to people who perform business analysis work, use business analysis deliverables, review or approve business analysis deliverables, and manage or mentor business analysis practitioners.

- *Perform business analysis*: whether you are new to business analysis, a seasoned business analysis practitioner, or somewhere in between the two, this book will provide a roadmap journey to guide you in your work. If you're relatively new to business analysis, it will familiarize you with effective business analysis practices and if you're on the seasoned end of the business analysis experience spectrum, it will refresh your knowledge and layer your learning.
- *Use business analysis deliverables*: when you are a consumer of business analysis work and deliverables, it is extremely beneficial to know what to expect. If you are a solution provider, this book will help you comprehend business analysis deliverables to create meaningful dialogue with the business analysis practitioner.
- *Review or approve business analysis deliverables*: whether you are the person who reviews, verifies, or validates the business analysis deliverables or you're the person who ultimately makes the final decision about business analysis deliverables, it's critical that you have complete information to make effective decisions. These business analysis deliverables will make or break the initiative as they drive progress, financial decisions, and ensure integrity. This book will help you confirm that the business analysis deliverables match the needs for the initiative.
- *Manage or mentor business analysis practitioners*: many managers of business analysis practitioners are unsure of how to measure or evaluate the work and deliverables that a business analysis practitioner produces. Mentors of business analysis practitioners may be unsure of how to

guide new or developing business analysis practitioners. Part of this is due to misunderstandings of the role of the business analysis practitioner and part of it is due to the expansion of the role. This book will help you comprehend the role, responsibilities, and deliverables that ensure business analysis success.

## STRUCTURE OF THE BOOK

This book is divided into the following chapters:

1. Introduction  
This chapter sets the stage for business analysis terminology, roles and responsibilities, the perspectives of business analysis, and business analysis competencies. Before embarking on the business analysis process journey, a depiction of the roadmap for the business analysis process will guide you through the rest of the book.
2. Step 1: Understand Your Stakeholders  
This chapter provides guidance on stakeholder identification and then goes deeper into stakeholder analysis to ensure a thorough understanding before planning or engaging stakeholder involvement.
3. Step 2: Understand the Business Context  
This chapter provides guidance for understanding the organization as a whole, performing situational needs analysis, and preparing situational justification for decision makers.
4. Step 3: Plan the Business Analysis Work  
This chapter provides guidance on the areas to be planned for, not only the business analysis work effort, but also developing a business analysis communication plan and a business analysis information management plan.
5. Step 4: Set Initiative Scope  
This chapter provides guidance on setting the initiative up for success by developing a clear and concise scope definition boundary.
6. Step 5: Develop Solution Requirements and Design Definition  
This chapter provides guidance on developing the business analysis information that directs the building of the solution to meet stakeholder needs.
7. Step 6: Scope Management  
This chapter provides guidance on maintaining agreement on scope and controlling scope in an ever-changing environment.
8. Step 7: Evaluate the Solution  
This chapter provides guidance on the business analysis practitioner's role as the solution is being built and throughout the solution's existence to ensure solution value continues to be met.
9. Glossary  
This book provides a glossary of terms that were likely defined in a chapter; however, this provides the reader a quick reference.

## HOW TO USE THIS BOOK

Some chefs prefer to follow a recipe in sequential order exactly as it is written. Others may need to begin in the middle because some of the recipe was prepared and handed off to the chef by a sous chef. Additional chefs may realize that they need to adapt the recipe to the changing circumstances and tastes of their clientele. Using this book is much like a recipe. You can read through it sequentially from cover to cover. You can pick it up in the middle of a step because a strategic business analysis practitioner hands off business analysis information for you to use tactically. Or, you can use the book to enhance your existing business analysis processes—what we like to call the spice! To enhance your reading experience, the book includes downloads for you to use for your business analysis work. See the Web Added Value (WAV™) information on page xix for details.

## SEVEN SUGGESTIONS FOR GETTING THE MOST FROM THIS BOOK

We have seven suggestions to help you make the most of your reading experience:

1. *Perform your own gap analysis:* begin with your current state of business analysis processes and identify what you want the future state to look like. Honestly assess your business analysis work and determine where there are gaps and opportunities.
2. *Plan where to start:* begin with the introduction and then review the chapter overviews in the preface to determine which step is the logical starting point based on your gap analysis.
3. *Read appropriate steps:* once you have planned which steps are applicable to you, read each chapter to comprehend the information.
4. *Purchase the supplemental Mastering Business Analysis Standard Practices Workbook:* for business analysis practitioners, the best way to digest the seven steps is to use the accompanying *Mastering Business Analysis Standard Practices Workbook*. This workbook will help you practice key business analysis concepts as you read.
5. *Put together an action plan:* for each step that you read, put together an action plan on how you will implement applicable tools, techniques, or competencies by planning:
  - a. What actions will you take?
  - b. When will you take action?
  - c. How will you take action?
  - d. Whose support will you need to take action?
6. *Implement appropriate steps:* after completing your plan, it is time to execute. A plan with no action is just a dream. This is where the rubber meets the road. If you want to improve, you need to act on what you will do differently.
7. *Evaluate your progress:* after you implement your action plan, determine what worked well, what didn't work well, and what could be done differently. Perform your own lessons learned or retrospective on your performance. Involving your manager, project managers or Scrum Masters, solution providers, and sponsors in this step will help your career soar.

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## ACKNOWLEDGMENTS

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We are very thankful to those who have contributed to our discipline, so that we could have this opportunity to continue evolving the business analysis profession by writing this book. These practitioners, authors, coaches, and mentors inspired us to provide our experiences and knowledge. We are thankful to assist in continuing to advance our profession.

### KELLEY BRUNS

I am grateful that Billie Johnson—my coauthor and friend—was willing to jump headfirst into this project when I first called her with the idea of writing a book. We went through a roller coaster of emotions on this initiative. Her strength and wisdom helped keep me going—even when I felt like stopping.

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I am grateful to the workplaces that helped frame me into the practitioner I have become and continue evolving into throughout my business analysis journey. Many of my greatest struggles became the moments when I learned the most. I cherish the experiences and the people I worked with.

Finally, I want to thank my family. My mom, Betty Griffith, and Jack Lint provided me with love and much-needed support that I greatly appreciate. I would like to dedicate my work on this book to my mom and my dad, Carson Griffith. When I was a little girl, my mom suggested that I should write a book someday—and she persisted through the years. My dad's lifelong encouragement and positive enthusiasm to follow my dreams (even when he didn't agree) inspired me to fulfill this goal and many others in my life. For everything, thank you!

## BILLIE JOHNSON

I am passionate about business analysis—the *doing* and the facilitation of eager business analysis professionals to further their toolkits and ultimately save the world with better requirements—but, write a book? My response to my coauthor, Kelley Bruns, when she approached me with this opportunity was, “I’m not sure, let me think about it.” This venture involved flexibility in order to keep up with our day jobs, travel for our writing summit, and remote collaboration. Now that our journey is complete, I truly thank you, Kelley, for the inclusion and encouragement to share these business analysis journey steps, tools, and techniques with our readers.

My business analysis career path began at ACS in the early ’90s and I want to recognize my band of brothers who supported the on-the-job type of business analysis work. This group included our leader, Lee Harper, programmers (as we called them then), Charley Walter (gone too soon) and Ricky George, and my fellow accountant (we did not realize we were performing business analysis), ByAnn Forte. Thanks for sparking the realization that we could not just make bad processes faster, but first analyze processes for improvement. We were ahead of our time with the use of personas and use cases to achieve user-centric solutions.

Sapient Consulting afforded me the opportunity to hone my business analysis skills on multi-year projects at Harvard University and Freddie Mac that foundationally changed the way the organizations conducted themselves. Thanks to Shannon Mukundan for recognizing my potential and encouraging support as the dream project manager for all of us on that Harvard team. On the Freddie Mac project and as I transitioned to another five years as a business architect employed by Freddie Mac, there were so many influencers, but I would especially like to recognize a few of them. Sue Ritchey—thanks for the structure and support of the business analysis work to help ensure that we had viable solutions. Roger Belveal, Experience Design Strategist Extraordinaire—I thank you for your continued support and feedback through the years for my course development and this book. Bill Farmer—thanks for being supportive of the business analysis activities and time that is required to reach that *good enough* point as you balanced the project management side of the coin.

Over the last ten years, I have had the pleasure of developing and facilitating business analysis seminars and training sessions. I want to thank the participants who shared their experiences that I could learn from, and for the pats on the back as well—which we all need—assuring me of a job well done. I have been lucky to work with some great organizations, of which there are too many to mention. I do want to recognize Carrie Harris at Walmart for her undying support through the years at her organization to offer courses and certificates to the hundreds of business analysts in her organization. Through Todd Britton’s leadership and support at New York State and the International Institute of Business Analysis (IIBA®) Albany Chapter, I have been trusted to provide business analysis guidance for the business analysts there, and I thank him. With over 6,000 students, there are certainly too many to mention, but know that it warms my heart to hear from you when you have reached out with questions or share your successes.

Recently, I was afforded the opportunity to work on a global multi-year project for strategic scope alignment. Thanks go out to Mary Jensen for providing support of the global workshops conducted in order to understand the users’ needs and expectations. Getting my hands in the sausage-making invigorates



my business analysis passion. I highly recommend instructors occasionally getting out of the classroom for an on-the-ground perspective.

Personally, I want to dedicate this book to my husband, Craig, since he listened for hours to content for which he does not share my passion, yet still supports my crazy endeavors. My family who asked, “How’s the book coming?” spurred me to the finish line. I appreciate all of my friends from the gym whose support I rely on to keep me sane. Thanks to all for providing me the canvas to paint the difference that business analysis can make for developing solutions that make life better.

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## ABOUT THE AUTHORS

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### KELLEY BRUNS

Kelley Bruns is a veteran corporate trainer, coach, mentor, training manager, course developer, and author with more than 25 years of experience helping enterprise project teams solve problems. She holds a master's degree in adult education with a concentration in training and development from Drake University. Kelley has facilitated and consulted with participants and clients throughout the world including corporations, government, and nonprofit entities. She is a former vice president of business analyst training at ASPE, and is a leading expert in business analysis and various approaches to project management and product development. Kelley is an International Institute of Business Analysis (IIBA®) Certified Business Analysis Professional (CBAP®), Project Management Institute certified Professional in Business Analysis (PMI-PBA)®, Project Management Professional (PMP)®, and Agile Certified Practitioner (PMI-ACP)®. She is also a Scrum Alliance accredited Certified Scrum Master (CSM) and International Consortium for Agile accredited ICP, ICP-BVA, and ICP-APM.



Kelley has dedicated her career to helping people transfer knowledge, skills, and abilities in both professional and personal settings in order to provide a strong return on their investment. Ms. Bruns was actively involved in the IIBA Enhanced Certification Redesign and the Endorsed Education Provider Advisory Group. She is uniquely talented at helping others learn best practices without having to learn the hard way. In her spare time, Kelley can be found hiking, whitewater kayaking, camping, and snowshoeing with her husband and dogs in the mountains near her home.

## BILLIE JOHNSON

Billie Johnson is a leading project management and business analysis expert and practicing professional who has been involved in establishing business analysis direction, processes, and modeling for almost 30 years—spanning financial, manufacturing, consulting, education, government, retail, and mining industries. She was an early adopter of the Certified Business Analysis Professional (CBAP®) certification, receiving her certification in May 2007; as well as achieving the Project Management Institute Professional in Business Analysis (PMI-PBA)® certification as soon as it was offered in July 2014. She is also a Certified Scrum Master accredited by the Scrum Alliance. Billie was a reviewer team lead for the IIBA Business Analysis Body of Knowledge (*BABOK® Guide*) Version 3. She periodically speaks at IIBA events, PMI events, and other professional conferences. For the last ten years, she has been teaching and consulting with large organizations and Fortune 500 companies. As a business analysis instructor, course developer, author, coach, and mentor, she enjoys furthering the field of business analysis by touching those in the field with tools to face their unique problems and opportunities. In her spare time, Billie and her husband, Craig, enjoy building memories with family and friends at their home on Lake Buchanan in Texas. Very special memories are the Grandmere and Papa camps in the summer with the grandkids.





This book has free material available for download from the Web Added Value™ resource center at [www.jrosspub.com](http://www.jrosspub.com)

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Downloads for *Mastering Business Analysis Standard Practices* include numerous templates and check-lists for better performing business analysis work.

# 1

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## INTRODUCTION

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The purpose of this book is to provide guidance on mastering business analysis. First, as with any profession, there is a foundational understanding required prior to digesting guidelines for performing the work of business analysis. This chapter is dedicated to providing that foundational information from the two leading organizations on business analysis—the International Institute of Business Analysis (IIBA®) and the Project Management Institute (PMI)—as well as some additional practical resources that are identified throughout this book. The intent of this chapter is to help guide readers to understand the differences and similarities between the IIBA and PMI that are related to understanding the profession of business analysis.

### WHAT IS BUSINESS ANALYSIS?

Even though the business analysis profession has only recently been recognized, the problems and opportunities surrounding it have been analyzed since the beginning of time. Consider the creation of the wheel; it came about because there was a need to move materials that were too heavy to carry quickly. Wheels on an axle allowed materials to be loaded on open containers and trucked to the needed location more efficiently. This is the result of a business analysis effort.

Business analysis is defined by both the IIBA and PMI as a set of activities to enable change in an enterprise by defining needs and recommending solutions that deliver continuous value to stakeholders. This short definition is packed with exciting and rewarding opportunities for both the business analyst (BA) and the enterprise. There is a natural gut reaction to identify an obstacle and immediately go into solution mode rather than trying to identify the underlying problem. Most folks have no trouble seeing the solution—it's the problem that eludes them.

The value that enterprises reap by investing in business analysis can be summarized as:

- Solutions that meet stakeholder needs and provide business value due to more reliable, higher quality requirements;
- Higher buy-in for the change by ensuring stakeholder engagement in the process;
- Much higher probability of projects being delivered on time, within scope, and within budget; and
- A reusable pattern on future change initiatives by building business analysis competency.

Research clearly indicates that enterprise projects are failing to deliver their intended business value. From 2012 through 2016, project success indicators have remained fairly constant. Research conducted by PMI

**Table 1.1** Project outcomes

Project Outcomes	2012	2016
Met original goals/business intent	64%	62%
Experienced scope creep	44%	45%
Deemed a failure	15%	16%
Completed within original budget	55%	53%
Completed on time	51%	49%
Failed project's budget lost	34%	32%

summarizes these results in Table 1.1. How much does this mean in dollars and cents? An estimated 12% of the money invested on projects is wasted due to poor project performance. According to a whitepaper by PMI called *Business Analysis: Leading Organizations to Better Outcomes*, the second leading cause of project failure is inaccurate requirements (39%), preceded only by changes in an organization's priorities (41%). Enterprises that have matured their business analysis practices are dramatically improving their probability of project success.

The necessary enterprise solutions are increasingly more complex and interrelated, providing business analysis professionals with an opportunity to engage stakeholders with multiple viewpoints in order to drive solutions. These solutions likely require changes in process, technology, and organizational structure. The need for these business analysis professionals has been predicted to grow by double digits, specifically 13–30% over the coming decade (see the Business Analysis Perspectives section of this chapter for more on this trend). Specifically, business intelligence (BI) skills are predicted as the highest need. According to a recent PwC report that was supported by data from Burning Glass Technologies, the 2020 estimate calls for 2.7 million job postings in the analysis space that require professionals with deep analytical (BI) skills. Also, business analysis is a profession that has been defined by *Harvard Business Review* as the *sexiest job of the 21st century*.

To keep current, the BA has the following sources:

- Business analysis professional organizations, guides to business analysis practices, and certifications:
  - IIBA
    - Guides to business analysis practices
      - *A Guide to the Business Analysis Body of Knowledge (BABOK® Guide)*, v3
      - *Agile Extension to the BABOK® Guide*
      - *IIBA Global Business Analysis Core Standard*
    - Certifications
      - Entry Certificate in Business Analysis™—recognizes individuals entering the field of business analysis
      - Entry Certificate in Business Analysis Plus™ (ECBA™+)—provides hands-on experience to grow knowledge into application for targeted skills
      - Certification of Capability in Business Analysis™ (CCBA®)—recognizes BA professionals who have 2–3 years of experience

- Certified Business Analysis Professional™ (CBAP®)—recognizes BA professionals who lead and have over 5 years of BA experience
- PMI
  - Guides to business analysis practices
    - *The PMI Guide to Business Analysis*
    - *Business Analysis for Practitioners—A Practice Guide*
  - Certification
    - PMI Professional in Business Analysis (PMI-PBA)®—recognizes professionals who have business analysis and project experience
- Association of Business Process Management (BPM) Professionals International
  - Guides to business analysis practices
    - *Guide to the Business Process Management Body of Knowledge®*
  - Certifications
    - Certified Business Process Associate®—recognizes broad-based BPM foundation-level skills and understanding
    - Certified Business Process Professional®—recognizes BPM professionals who have at least 4 years of BPM experience
    - Certified Business Process Leader™—recognizes a BPM mastery level competency
- Business Architecture Guild
  - Guides to business analysis practices
    - *A Guide to the Business Architecture Body of Knowledge®*
  - Certification
    - Certified Business Architect®—recognizes proficiency in the field of business architecture

As of the end of 2018, approximately 84% of the over 12,000 individuals holding the previously mentioned business analysis-related certifications are IIBA certifications. All of these certifications require re-certification, which provides BAs with a chance to update their skills by earning development units that are recognized by certifying bodies. The IIBA conducts annual salary surveys for business analysis professionals, and most business analysis professionals with a minimum of one certification typically receive between 7–31% more in earnings than those without certification. Business analysis professionals with the CBAP certification receive 16–38% more in salary. Of note, in India business analysis professionals with a minimum of one certification receive 52% more in earnings. These statistics remind us that there is value in certifications. Other ways BAs can keep their skills sharp include:

- Networking opportunities
  - Professional organization chapter events
  - Online professional networking sites with opportunities to join business analysis groups
- Business analysis training
  - Live instructor-led training sessions (virtual or face-to-face)
  - Webinars

- Reference material
  - Blog posts
  - Whitepapers
  - Business analysis books (like this one)

# WHO DOES BUSINESS ANALYSIS?

The profession of business analysis has been experiencing an evolution in recent history. Not all enterprises define the business analysis role exactly the same way in their job descriptions due to differences in size, orientation, organizational structure, departments, and culture.

Consideration and care must be exerted by enterprises to be clear about the roles, responsibilities, job descriptions, and hiring practices of business analysis professionals to ensure the right fit. Business analysis professionals may be referred to by many different titles as noted in Table 1.2. This table is not intended to be an all-inclusive list of job titles and is meant to show the diversity of titles that perform business analysis work. According to the 2017 Global Business Analysis Salary Survey, 83% of business analysis professionals have the following titles: BA, Data Analyst, Product Analyst, Business Process Analyst, Business Systems Analyst, or Systems Analyst. The exciting news—business analysis is not just for IT anymore due to broadening perspectives and different solution outcomes that are not always technologically based. Going forward in this book, all those conducting business analysis work regardless of title will be identified as BAs.

Support from all levels of an enterprise is essential in order for BAs to successfully perform their responsibilities. This support must include senior level personnel of an organization, as well as project teams. BAs need the support of project managers and sponsors to remove roadblocks that will impede the BA from communicating effectively with stakeholders since most BAs do not possess any formal authority within the organizational hierarchy. According to the whitepaper by PMI called *Business Analysis: Leading Organizations to Better Outcomes*, 91% of respondents from highly mature business analysis practices reported that the role of the BA is valued by management, sponsors, and stakeholders, as compared to 53% of respondents working for less mature organizations. However, according to a recent survey by PMI, only 18% of respondents rated their business analysis practice as highly mature.

**Table 1.2** Titles for business analysis professionals

Job Titles for Business Analysis Professionals			
Business Analyst	Business Systems Analyst	Operations Analyst	Requirements Manager
Business Architect	Data Analyst	Process Analyst	Solution Architect
Business Change Facilitator	ERP Consultant	Process Manager	Solution Designer
Business Consultant	Functional Architect	Product Analyst	Strategic Business Analyst
Business Process Analyst	Hybrid Business Analyst	Product Coordinator	Strategy Consultant
Business Process Engineer	Information Architect	Product Manager	Systems Analyst
Business Relationship Manager	IT Analyst	Product Owner	Technical Consultant
Business Requirements Analyst	IT Business Analyst	Requirements Analyst	User Experience Designer
Business Solutions Analyst	Operational Analyst	Requirements Engineer	



## WHAT QUALITIES DO BAs POSSESS?

There are some key developments that are helping the business analysis profession to evolve, including:

- Finding value in having business analysis performed before a project is initiated in order to help properly define the problem or strategic opportunity
- Expanding the business analysis profession into specialized roles to cover the entire initiative
- Discovering that business analysis work delivers value beyond software solutions
- Tailoring of business analysis services based on unique project characteristics to provide more value to the organization
- Using a hybrid role for practitioners who are performing both project management and business analysis activities

While many roles in organizations are static, the BA role is one that will be continuously evolving. As this happens, knowing what qualities are essential will help a BA to become more effective. The following qualities are critical for success in business analysis:

- *Big picture view versus detailed information*: this involves the ability to be a strategic thinker in order to provide the big picture for an initiative, while at the same time being able to pinpoint details. On the spectrum of these two qualities, most people are gifted at one, but not both. Both strategic thinking and detail-oriented thinking can be learned. In business analysis, start with the strategy—the business requirements—and decompose to the stakeholder requirements, solution requirements, and transition requirements.
- *Change advocates*: this includes people who will help the stakeholders and the organization transition from the current reality to the desired future state by minimizing negative impacts and increasing positive outcomes in terms of value to the organization. Effective BAs assess the culture of the enterprise to accept change and the readiness of the enterprise to adapt to the cultural changes that will occur.
- *Forward thinking*: this type of person needs to look at not only the here and now (current state), but also examine what needs will be required in the future, including potential growth opportunities. This quality includes being able to differentiate between potential solutions that appear to meet current stakeholder needs and one solution that has the potential to meet future needs.
- *Inquisitiveness*: This would include someone who is curious and will investigate both strategic opportunities and the root causes of problems. Being interested, asking the right questions, and digging deeper to solve problems are some of the inquisitive and investigative qualities that help a BA to be effective.
- *Multi-dimensionality*: this would include people who exhibit knowledge of the particular perspective or domain that is being analyzed. The business analysis profession has expanded beyond IT. This multi-dimensional quality also includes paying attention to scope regarding impacts, change, risks, and stakeholder engagement.
- *Open-mindedness*: this would require a person to have an impartial approach when engaging stakeholders and is a critical quality for business analysis. The way BAs ask questions can reveal biases and close-mindedness. The best way to alleviate close-mindedness is to ask a variety of questions.
- *Solution and answer seeker*: this type of person will pursue answers to root causes, perform what-if analysis, challenge assumptions, and recommend viable solutions to address business needs.

The qualities identified here are intended to be used in combination with the competencies, knowledge, and skills that are discussed later in this chapter. When hiring BAs, each enterprise needs to determine which of the qualities, competencies, knowledge, and skills to consider for interview questions. Due to the continuous evolution of the BA role, organizations must also provide training, mentoring, and coaching on techniques and skills to enhance successful outcomes for the business.

## ORGANIZATIONAL STRUCTURES AND THE BA

Just as there are differences in roles and responsibilities for BAs, there are also unique organizational structures related to business analysis. By 2020, employers in the U.S. will need 876,000 business analysis professionals according to the U.S. Bureau of Labor Statistics Employment Projections Program. Appropriate organizational structures to support those BAs and their career progression opportunities will become critical in order for enterprises to retain the most effective BAs.

One of the more tricky questions in workplaces is determining where to put the BA on an organizational chart. Part of this conundrum is due to differing job specifications for BAs and hybrid roles. For organizations that have functional BAs and technical BAs, it makes sense to have the business BAs report to functional managers in their respective business units and have the technical BAs report to IT managers; however, not every workplace is this straightforward.

When organizations view the BA as a project role, they tend to place the BA in IT. One of the disadvantages of placing the BA in IT is that the BA doesn't become involved in the project until after the business case is developed and the project is recognized. More mature workplaces are realizing the value of having the BA involved in the creation of the business case because of the analysis skills that are needed to examine the problem or opportunity. Oftentimes, when a business unit has subject matter experts (SMEs) perform strategy analysis or needs analysis, that person does not have the analysis skills necessary to adequately determine the best solution. It is in these situations where the BA serves a balancing role with the business SMEs—the BA provides an unbiased viewpoint to the situation the business is experiencing.

Having BAs report to a functional area is beneficial in ensuring early involvement of BAs in initiatives and projects. Less mature organizations have not yet recognized the value of early involvement of the BA role in understanding business needs and helping drive toward a feasible solution. Organizations that do realize this value are reaping the benefits of cost savings, efficiencies, and increased stakeholder satisfaction.

Understanding different perspectives can also influence reporting structures for BAs. For example, BAs in BI, agile, or IT often report to IT or information systems (IS) leadership; while BAs in enterprise architecture and BPM report to functional leadership or the IT/IS department.

In the 2017 Global Business Analysis Salary Survey, 46% of business analysis professionals report to the solution space (IT/project management), 34% report to a functional business area/product, and 20% report to the center of excellence/expertise/project management office (PMO).

Regardless of where the BA resides on an organizational chart, it is critical that BAs:

- Have access to key stakeholders
- Build relationships with stakeholders

- Engage stakeholders throughout each project, program, portfolio, or initiative
- Lead stakeholders without formal authority
- Become a trusted advisor

Each organization needs to examine the overall strategy, vision, goals, business drivers, job descriptions, and perspectives to determine the best fit for placement of the BA role in the organizational structure.

## BA CAREER PROGRESSION

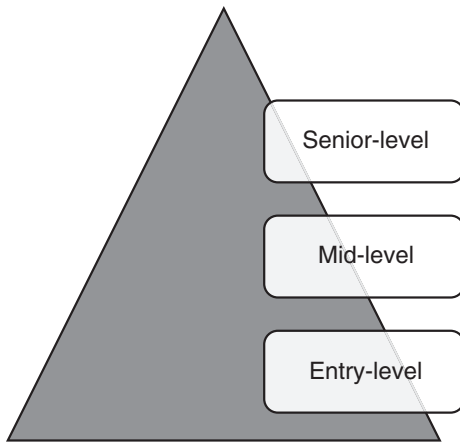
When selecting a career, many practitioners are not familiar with the BA role and where it comes from. Surveys show that most BAs do not consciously seek out the role. In fact, we (the authors of this book) just kind of fell into it. One of us came from an education and accounting background and the other came from a strategic and process improvement background. It's not important where you come from; it's critical that you have the appropriate skills to effectively perform business analysis work. BAs can be formed through any of the following backgrounds or combinations:

- *Formal degree programs*: example programs include business administration, business analysis, business analytics, BI, computer science, data analytics, etc.
- *IT or technical background*: knowledge of specific systems and solutions
- *Department, functional areas, or lines of business experience in the business domain*: knowledge of processes and systems used in specific areas
- *Industry or specific trade experience*: knowledge of history, trends, and competitive advantages

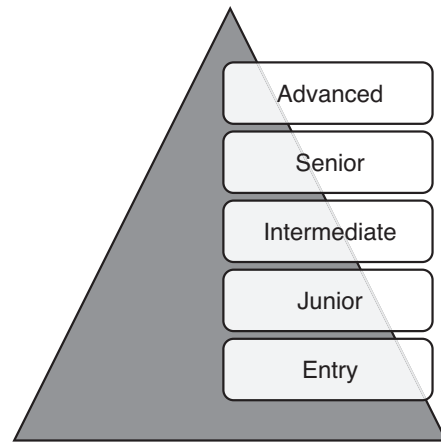
There are many paths that a practitioner can take to become a BA. BAs typically begin in either the business domain or the technical domain. The type of perspective a BA will engage for an initiative also needs to drive your career progression. Perspectives include the types of tasks and techniques that a BA needs to use in order to successfully complete an initiative.

The size of an organization and the number of BAs employed at an enterprise also have a direct influence on career progression. There are enterprises that do not recognize any levels of business analysis (especially smaller enterprises) while others acknowledge three levels: entry-level, mid-level, and senior-level (see Figure 1.1). Larger enterprises often recognize five levels: entry-level, junior, intermediate, senior, and advanced (see Figure 1.2). The factors distinguishing the levels and types of BAs include competencies, knowledge, standard of work, autonomy, complexity/scope of work, and perception of context. In the 2017 Global Business Analysis Salary Survey, 52–69% of respondents shared that their workplace supports multiple business analysis levels for career path progression. The number of business analysis career levels varies: one to three levels (52–61%), four to five levels (17–39%), and even more than six levels (8–22%). The percentage variations are based on country breakdowns.

Larger organizations have the benefit of having peer BAs provide coaching and mentoring to rising BA professionals. This guidance helps to shorten the learning curve to becoming an effective BA. When working at a smaller organization, the BA can get help from local chapters or networks of BAs. The Internet, training organizations, and books also provide resources that support career progression.



**Figure 1.1** Business analyst career progression—three levels



**Figure 1.2** Business analyst career progression—five levels

The IIBA Business Analysis Competency Model version 4.0 includes five levels of proficiency for BAs, including:

1. *General awareness*: having basic awareness, skills, and knowledge of business analysis
2. *Practical knowledge*: following rules, guidelines, and prescribed ways of performing business analysis work
3. *Skilled*: owning and completing small initiatives and business analysis tasks
4. *Expert*: retaining skills, knowledge, and abilities to complete any type of business analysis effort, coaching and mentoring others, becoming a value manager, and sharing proficiency throughout the organization
5. *Strategist*: influencing and expanding business analysis practices, advancing business analysis, and creating innovative solutions

When a BA lacks essential business analysis skill sets, the business analysis effort and the initiative will suffer. When this occurs, it's important to identify the root cause of the variance in BA skill sets. Once the root cause is identified, then appropriate responses can be taken to assist in career alignment, career development, coaching, mentoring, etc.

The IIBA Business Analysis Competency Model version 3.0 also recognizes three types of business analysis job profiles:

- *Generalist*: a practitioner who may or may not have domain expertise and uses a variety of techniques to complete various initiatives
- *Specialist*: a practitioner who has greater expertise and is able to solve complex business problems using more focused techniques for an initiative
- *Hybrid*: a practitioner who has varying business analysis competency, as well as expertise in another discipline

Many enterprises are incorporating the following hybrid roles:

- *BA/project manager*: reasons for this type of role are due to the overlap of requirements (product and project), risks (product and project), stakeholder identification and analysis, communication with stakeholders, and quality (product and project)
- *BA/user experience*: reasons for this type of role are due to the overlap of stakeholder requirements with specific user interface requirements
- *BA/product owner*: reasons for this type of role are due to the overlap of identification of requirements via user stories and prioritizing the value of the user stories based on the needs of the stakeholders—both the BA and the product owner roles serve as a liaison to the stakeholders
- *BA/Scrum Master*: reasons for this type of role are due to the overlap of facilitating, negotiating, solving problems, and coaching of all the stakeholders
- *BA/tester*: reasons for this type of role are due to the overlap of requirements engineering leading to the creation of test plans and test scripts
- *BA/developer*: reasons for this type of role are due to the overlap of the same person translating the *why* and *what* of requirements into *how*

In the 2017 Global Business Analysis Salary Survey, business analysis professionals reported that they spend 46% of their time on core business analysis work with the remaining time spent on product owner, data analytics, Scrum Master, or project management responsibilities. These statistics support the increasing need for hybrid roles.

There are several more reasons for having hybrid practitioners in organizations today. Some of the additional motives include:

- *Generalist roles*: organizations that are striving to be more agile often require practitioners to be able to perform multiple roles to avoid bottlenecks on projects and initiatives.
- *Lack of BAs*: in many situations, BAs are assigned to multiple projects and operational responsibilities. When this occurs, there can be a shortage of BAs in the workplace, which can result in employees performing hybrid responsibilities to get projects and initiatives completed.
- *No BA roles*: there are organizations that do not recognize or even know that the role of a BA exists. While the title might not exist in an organization, the business analysis work still needs to be completed. When an organization doesn't acknowledge the BA role, *needs assessment* is very easy to overlook.
- *Revolving BAs*: for organizations that hire contract BAs or use offshore BA resources, there is the risk of losing the BA. This risk is due to projects and initiatives getting completed, budget cuts, or even situations where BAs use the organization to gain knowledge and acquire better paying positions elsewhere. Organizations that follow this strategy need to consider the loss of knowledge that exits the door when these BAs leave.
- *Role misalignment*: very few organizations have pure BA roles that support what the IIBA and PMI describe in its literature. This isn't necessarily bad; this is a reality. There are practitioners with the title of BA who do not perform any business analysis responsibilities, and there are practitioners who do not have the title of BA and yet they perform multiple business analysis tasks.

There are unique advantages to hybrid roles, including:

- Better refined project scope and product scope
- Capability to help when resources are scarce
- Easy access to the roles being fulfilled (both for the practitioner and for the stakeholders), thus saving time trying to find the person
- Enhanced change control processes
- Improved quality due to ownership of the product, service, or result

Utilizing hybrid roles for enterprises makes sense on small, less complex, and low-risk projects or initiatives. Smaller enterprises often capitalize on hybrid roles out of necessity. These organizations might not have enough staff to fulfill an individual role for the initiative or project.

There are some unique disadvantages to hybrid roles, which include:

- Conflicting interests and biases related to the triple constraints of time, cost, and scope: a constraint is a factor that will limit or restrict a solution, solution option, process, project, initiative, program, or portfolio.
- Conflicting roles and responsibilities: projects and initiatives benefit from the healthy collaboration and friction that exists between the different people performing the roles
- Confusion regarding responsibility and accountability
- Ineffective knowledge transfer of lessons learned
- Lack of career development opportunities for employees on projects that want to learn how to perform portions of the hybrid roles
- Transitioning the project or initiative into an operation—often the hybrid person becomes responsible for maintaining the solution and cannot move on to new work

Hybrid roles are challenging during large, complicated, and high-risk projects or initiatives. When enterprises violate the previously listed guidelines, the hybrid role becomes the bottleneck of the project. Two of the most challenging aspects of the hybrid role are that only a portion of the practitioner's experience will qualify him/her for a higher level of certification in business analysis and that the business analysis responsibilities can be misaligned with the practitioner's career goals and experience.

A practitioner who is in a hybrid role has the opportunity to progress in more than one discipline. This can be both an advantage and a disadvantage regarding your career development. Each practitioner needs to look at their individual career goals to determine which job profiles will help determine the best career pathway.

If you are considering a potential hybrid position, consider these factors in your decision:

- The business analysis tasks and techniques you like to do or don't like to do
- The business analysis tasks and techniques you perform effectively or ineffectively
- The type of roles and responsibilities you want to fulfill in the future and align this hybrid role with your career progression
- The experiences and opportunities you will gain with hybrid responsibilities
- The type of business analysis certification you want to acquire

In addition to a BA progressing within the business analysis profession, there are also opportunities to advance into other roles, including business architect, enterprise architect, manager of BAs, director, vice president, and the C-suite. In years past, the only opportunity for most BAs to progress was to

become a project manager (PM). Now there are vast opportunities for BAs seeking growth within the profession itself.

### In Real Life . . .

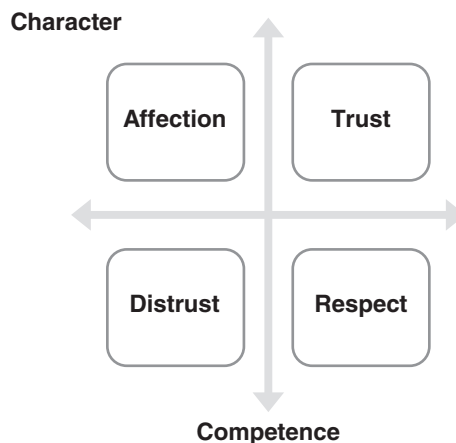
While analyzing the current state of a healthcare IT platform provider, I learned that they had four tiers of BAs. Two of the greatest challenges they faced were: (1) ensuring consistency as to the responsibilities for the different levels across the multiple lines of business, and (2) safeguarding how BA promotions happened across the varied lines of business. Enterprises that are considering the creation of different levels/tiers of BAs need to keep those factors in mind, as well as ensuring appropriate progression documentation, transparent communication, advancement work potential, and eliminating as much bureaucracy as possible in the process.

## BECOMING A TRUSTED ADVISOR

Basically, there are two functions of trust—character and competence. Keep in mind that trust levels vary based on the situation. For example, someone might ask, “Do you trust your husband?” and I would respond, “Implicitly.” Their response then might be, “So you would trust him to perform your dental work?” I would respond, “Of course not, dental work is not his core competency.” Trusting someone does not mean they can perform work competently.

Figure 1.3 helps in understanding the two functions of trust regarding character and competence:

- Low character and low competence results in distrust
- Low character and high competence establishes respect
- High character and low competence produces affection
- High character and high competence creates prevailing trust



**Figure 1.3** Functions of trust



The BA needs to consider the perceptions that stakeholders have of the BA—namely, how would they map you on the character/competence matrix? When the perception is not in the trust quadrant, it is critical for the BA to work to raise the character and/or competence level in the stakeholders' eyes.

Building trust in business analysis cannot be taken lightly. Consider these factors when trying to build trust with stakeholders to become a trusted advisor:

- *Focus on the needs and requirements of stakeholders:* always look out for their best interests on projects and be careful with information—this helps a BA to build trust with stakeholders.
- *Become attentive to others' needs:* the majority of trust breakdowns occur when a person pays more attention to themselves than to others. Becoming a trusted advisor involves constructing relationships.
- *Master interaction and interpersonal skills:* these skills are described in the Underlying Competencies section of this chapter. Trust is created through communication, conversation, and active listening.
- *Be willing to take risks in order to build trust:* relationships begin when one or both parties take a risk. According to authors Charles H. Green and Andrea P. Howe, trust is positively tied to risk; by taking appropriate risks you can create trust in the relationship with a stakeholder.
- *Rise above your natural instincts to build trust:* it's important to stop the following behaviors:
  - Trying to influence people
  - Being self-preserving
  - Responding via fight or flight
  - Trying to always win

One of the best ways to gain credibility with stakeholders is to admit it when we don't know the answer.

- *Listen to others in order to build mutual benefits:* a BA who listens to others is more likely to be listened to, which is the best way to begin to influence others. According to Green and Howe, mutual benefit means, "If you listen to me, I will listen to you. If you do not listen to me, I will not listen to you." It is of great benefit for the BA to be genuinely interested in stakeholders.
- *Make a good first impression:* stakeholders will make trust judgments very quickly and consider both rational and emotional factors during their first interaction with a BA.
- *Own any and all mistakes:* the occasional mistake made by a BA will be forgiven provided there is deep trust with a stakeholder. Consistent patterns of mistrust in a relationship are the factors that destroy trust. In a deep trusting relationship, owning up to mistakes actually increases trust.
- *Trust the stakeholders:* when a BA trusts a stakeholder, odds are that the stakeholder will behave in a much more trustworthy way than if the BA was suspicious of that stakeholder. *You get what you give.*
- *Be a dependable advisor to the stakeholders:* consistency in thoughts, words, and actions creates credibility in the stakeholders' mind.



**In Real Life . . .**

While working as a hybrid BA on a succession planning initiative at a large manufacturer, I had the opportunity to work closely with both internal employees and contracted resources from our IT department. At the end of the project, I provided feedback to the director of IT regarding the contributions that each team member made to the project. I copied each team member on what I included in my feedback. I wasn't aware of the impact that gesture made until the next phase of the succession planning effort where I needed the expertise and work of the same team members. The director of IT told me that he would be happy to provide as much as he could because I took good care of his resources. The team members contributed even better on the succeeding phase than the previous one because they knew that I trusted and appreciated them.

The preceding factors focused on how to build trust, while the following elements are known as trust crushers:

- Disclosing confidential information
- Creating a competitive environment
- Communicating within a hierarchy (rather than team-based communications)
- Not doing what you say
- Micromanaging
- Not making decisions
- Being incompetent

When trust is absent, the requirements elicitation process will take longer, be incomplete, and lead to lower morale.

Becoming a trusted advisor means being more proactive than reactive in identifying areas of improvement before being asked by stakeholders, but also validating that improvement is necessary with them. Being proactive raises the value of the BA and increases the chances of retaining the role in the enterprise. As the business domain sees the business value realized from solutions, they begin to trust the BA more and more to help them be more effective in their work. When a BA is requested by stakeholders to work on a project or initiative or when he/she is sought out by a stakeholder for advice, that is a sign that the BA is progressing toward becoming a trusted advisor.

## **BUSINESS ANALYSIS COMPETENCIES**

At first glance, it appears that the BA role involves mainly technical competencies. Upon further review, it becomes evident that BAs need to possess an abundance of interpersonal skills in addition to the technical skills. For most BAs, the technical skills can be acquired and learned with practice. The interpersonal

skills, which some people refer to as *soft skills*, are more difficult and need to be refined throughout a BA's career. This section includes the critical competencies for BAs to acquire and possess.

## Core Concept Model

The BABOK® *Guide v3* includes the *Business Analysis Core Concept Model*™ as a visual framework for BAs to perform business analysis. The model represents six core concepts:

- *Change*: going through a transformation in response to a need
- *Need*: problem or opportunity that requires being addressed
- *Solution*: specific way to satisfy one or more needs
- *Stakeholder*: group or individual—has a relationship to the change, need, or solution
- *Value*: worth, importance, or usefulness to a stakeholder, considering the context
- *Context*: circumstances that influence, are influenced by, and provide understanding regarding the change

Due to the relationships between the six core concepts, each has a dependency on one another regarding change. The six core concepts also help BAs determine the quality of their work and the ability to identify the definition of completeness.

There are multiple performance competencies within this model: 1) *knowledge areas* include the knowledge and groups of tasks that are necessary for BAs to perform; 2) *techniques* are the different ways that BAs perform the tasks or the format of a task output; and 3) *underlying competencies* include the skills, abilities, and personal characteristics that BAs use to perform the tasks and techniques. The underlying competencies are included in the next section of this chapter.

## Underlying BA Competencies and Skills

The BABOK® *Guide v3* recognizes 29 underlying competencies that are divided into six categories. Underlying competencies are the skills, knowledge, behaviors, and personal qualities that help a BA perform their tasks and techniques effectively.

The PMI *Guide to Business Analysis* recognizes 35 processes and six business analysis process groups that are essential for BAs to perform across these six knowledge areas:

- Needs Assessment
- Stakeholder Engagement
- Elicitation
- Analysis
- Traceability and Monitoring
- Solution Evaluation

PMI also identifies 40 skills that are necessary for the business analysis role. Table 1.3 includes the skills deemed necessary for the BA by the IIBA and PMI and where they overlap.

**Table 1.3** Competencies business analysts use

Competencies	IIBA BABOK® Guide v3 Underlying Competencies						PMI Guide to Business Analysis Business Analyst Competencies					
	Analytical Thinking and Problem Solving	Behavioral Characteristics	Business Knowledge	Communication Skills	Interaction Skills	Tools and Technology	Analytical Skills	Expert Judgment	Communication Skills	Personal Skills	Leadership Skills	Tool Knowledge
Active Listening									X			
Adaptability		X								X		
Business Acumen			X					X				
Business Analysis Tools and Technology						X						
Change Agent											X	
Communication Tailoring									X			
Communication and Collaboration Tools												X
Communication Tools and Technology						X						
Conceptual Thinking	X											
Conceptual and Detailed Thinking							X					
Creative Thinking	X						X					
Decision Making	X						X					
Design Thinking							X					
Desktop Tools												X
Enterprise/Organizational Knowledge								X				
Ethics		X								X		
Facilitation					X				X			
Industry Knowledge			X					X				
Leadership and Influencing					X							
Learner										X		
Learning	X											
Life-cycle Knowledge								X				
Listening				X								
Methodology Knowledge			X									
Modeling Tools												X
Multitasking										X		

Continued

	IIBA BABOK® Guide v3 Underlying Competencies						PMI Guide to Business Analysis Business Analyst Competencies					
	Analytical Thinking and Problem Solving	Behavioral Characteristics	Business Knowledge	Communication Skills	Interaction Skills	Tools and Technology	Analytical Skills	Expert Judgment	Communication Skills	Personal Skills	Leadership Skills	Tool Knowledge
<b>Competencies</b>												
Negotiation											X	
Negotiation and Conflict Resolution					X							
Non-verbal Communication				X					X			
Numeracy							X					
Objectivity										X		
Office Productivity Tools and Technology						X						
Organization and Time Management		X										
Organization Knowledge			X									
Personal Accountability		X										
Personal Development											X	
Political and Cultural Awareness								X				
Problem Solving	X						X					
Product Knowledge								X				
Professional Writing									X			
Relationship Building									X			
Reporting and Analysis Tools												X
Requirements Management Tools												X
Research Skills							X					
Resourcefulness							X					
Self-awareness										X		
Solution Knowledge			X									
Standards								X				
Systems Thinking	X						X					
Teaching					X							
Teamwork					X							
Time Management										X		
Trusted Advisor											X	
Trustworthiness		X										

Continued

	IIBA BABOK® Guide v3 Underlying Competencies						PMI Guide to Business Analysis Business Analyst Competencies					
Competencies	Analytical Thinking and Problem Solving	Behavioral Characteristics	Business Knowledge	Communication Skills	Interaction Skills	Tools and Technology	Analytical Skills	Expert Judgment	Communication Skills	Personal Skills	Leadership Skills	Tool Knowledge
Verbal Communication				X					X			
Visual Communication									X			
Visual Thinking	X											
Work Ethic										X		
Written Communication				X								

Legend:

X = IIBA BABOK® Guide v3 Competencies or PMI Guide to Business Analysis Competencies

X = Agreement on Competencies

### In Real Life . . .

In a recent mortgage industry redesign project, the stakeholders expressed that a new platform was needed for the agreement application because their current platform was no longer supported. The contract life-cycle process was perfect; hence, just build a new platform. This was seen as a technology-only project. In eliciting more information about the expectations of the new agreement application, a stakeholder mentioned that this new application should help reduce the customer contracting life-cycle timeline—a major factor for cost and time savings. This realization created a new, explicit goal to reduce the contract life cycle. This technology-only project now became a process improvement and organizational redesign project as well; something that could only have happened once more questions were asked.

## BUSINESS ANALYSIS PERSPECTIVES

The BA professional skill set is not just for IT projects any longer. These analytical skills are required for working in different initiative contexts such as process improvement, strategic initiatives, reporting needs, automated solutions, etc.

The BABOK® Guide v3 defines these business analysis opportunities as *business analysis perspectives*. The BA can expect an initiative to include multiple perspectives. Depending on the perspectives, the BA will vary techniques and tasks. To guide practitioners in mastering business analysis, the steps that are defined in subsequent chapters are applicable to all perspectives. The variation of tasks and techniques will be outlined based on the following five perspectives.

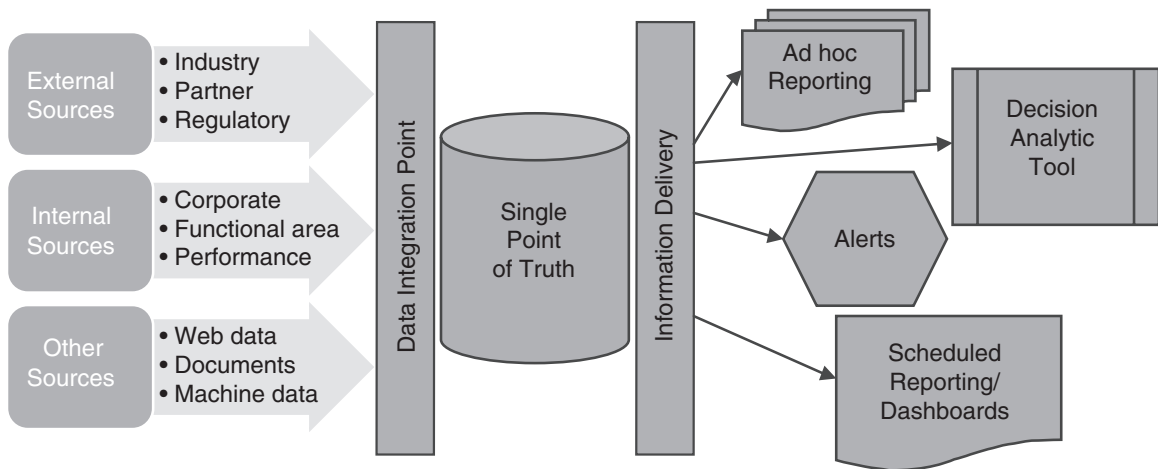
## The BI Perspective

This perspective recognizes the need to focus on the data that provides value-added information. The impact of information can be seen everywhere. Every mention of the *cloud*, which is frequently the topic of conversation, is seeking to understand the best way to make information accessible. The BA who is working in this BI perspective seeks to understand the impacts related to how data is sourced, transformed, integrated, and enhanced in order to support business decision making. This decision-making support can be strategic, tactical, or operational. Typically, executive-level staff are seeking strategic information, management is seeking tactical information, and process personnel are seeking operational information. The BA working on any change initiative should be aware of these needs. The astute BA will ensure that these information needs are properly elicited to avoid gaps in the information that is available upon implementation.

The key objectives are to have reliable, consistent, and accurate information. With data being sourced from multiple internal and external places, this objective is hard to accomplish without a *single point of truth* for this diverse business data. Approaching data from this BI perspective promotes an enterprise-wide view of information management. Figure 1.4 depicts a conceptual framework for this *single point of truth* and indicates the need for information governance of data integration and information delivery that must be maintained.

## The BPM Perspective

This perspective seeks to ensure that delivery of value is optimized across end-to-end processes. The processes may be manual, automated, or a combination of both. Enterprises that hold a process-centric view treat BPM as an ongoing effort and an integral part of the ongoing management and operation of the



**Figure 1.4** Single point of truth

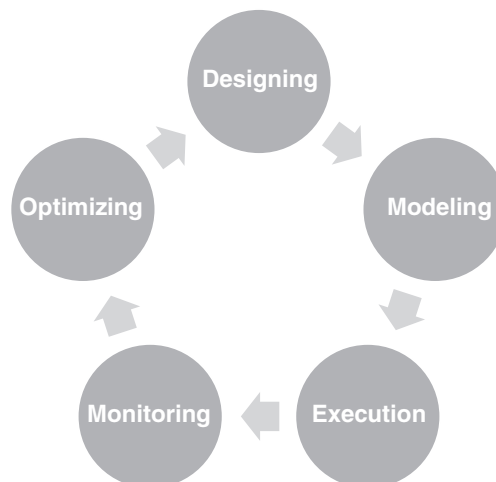
enterprise. There are many BPM frameworks and methodologies that the BA may employ, but all of them involve the steps depicted in Figure 1.5 and are explained in the following list:

- *Designing*: understanding current and future processes to develop a gap analysis. BAs often examine activities for these factors before considering automation of the business process:
  - Bureaucracy
  - Value-added versus non-value-added
  - Redundancy
  - Simplify
  - Process time
  - Cycle time

Automating an ineffective and inefficient business process will not fix the business process. Finding and fixing areas of improvement is something that needs to be performed before even considering automation of the business process. Throughout this gap analysis, BAs are also investigating how to prepare business stakeholders for the transition from the current state to the future state.

- *Modeling*: graphical representation of current and future states to analyze the potential value. Modeling helps BAs and business stakeholders see potential bottlenecks, inefficiencies, and problems.
- *Execution*: actual execution of the processes to identify bottlenecks, defects, and/or errors.
- *Monitoring*: collection of analytical data to ensure value and recommend improvement opportunities. This involves an ongoing effort to improve a business process and making adjustments as necessary so the business process gets better over time.
- *Optimizing*: ongoing repetition of the designing, modeling, execution, and monitoring. BAs follow a structured problem-solving approach to perform optimization and seek to make the business processes adaptable to changing business needs.

BPM helps enterprises enhance business processes in order to accomplish more efficient and effective outcomes. Performing this perspective allows BAs the opportunity to exceed stakeholders' expectations.



**Figure 1.5** BPM cycle

While performing BPM, BAs focus intently on the process to identify improvement and involve the business process stakeholders.

**In Real Life . . .**

A manufacturing facility used a structured problem-solving approach to decrease both the process time and the cycle time days for new orders. The process model took up all four walls of a 400-square-foot conference room. Involving the business stakeholders in defining, measuring, analyzing, implementing, and controlling helped them realize how big the problem truly was—as well as gained their support and buy-in for the changes that would be necessary to decrease the cycle time from 25 days to five days.

BPTrends reported in *The State of the BPM Market 2016* that the business drivers causing organizations to focus on business process change are:

1. The need to save money
2. To improve an existing process or create a new process
3. To improve customer satisfaction
4. To improve organizational responsiveness
5. To improve business coordination and control
6. Compliance with new regulations and IT upgrades
7. One-time events such as mergers and acquisitions

Of course, process improvement is nothing new since there are processes evident in just about everything we do. Consider the processes at play from waking up in the morning to getting ready for the day. These processes vary based on the day of the week and the calendar tasks involved. One typically is analyzing ways to reduce the amount of time it takes to *get ready* in the morning. The difference in using a structured BPM approach is the diligence for continual improvement. Table 1.4 provides a timeline for the evolution of BPM. As this table is reviewed, the tools used to manage processes have evolved as well. Table 1.5 depicts the BPM methodologies and short descriptions of each that are being used today. These methodologies lend themselves to being more appropriate based on the focus. The percentages in this table reflect organizations that use multiple methodologies, thus the total percentage is greater than 100. These areas of BPM focus are depicted in Figure 1.6. These tables and figures are certainly not meant to intimidate. A savvy BA is aware of the BPM level of engagement, tools, and methodologies that are available when assigned a project. As stated previously, multiple business analysis perspectives are likely involved on any one project.



**Table 1.4** BPM evolution

Phase	Time Frame	Business Drivers	Organizational Structure	Technology	Tools
Industrial Age	1750's–1960's	<ul style="list-style-type: none"> <li>• Labor Specialization</li> <li>• Task Productivity</li> <li>• Cost Reduction</li> </ul>	<ul style="list-style-type: none"> <li>• Functional Hierarchy</li> <li>• Command and Control</li> <li>• Assembly Line</li> </ul>	<ul style="list-style-type: none"> <li>• Mechanization</li> <li>• Standardization</li> <li>• Record Keeping</li> </ul>	<ul style="list-style-type: none"> <li>• Scientific Management</li> <li>• PDCA Cycle*</li> <li>• Financial Modeling</li> </ul>
Information Age—Phase 1—Process Improvement	1970's–1980's	<ul style="list-style-type: none"> <li>• Quality Management</li> <li>• Continuous Flow</li> <li>• Task Efficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Multi-Industry Enterprises</li> <li>• Line of Business Organizations</li> <li>• Mergers and Acquisitions</li> </ul>	<ul style="list-style-type: none"> <li>• Computerized Automation</li> <li>• Management Information Systems</li> <li>• Manufacturing Resource Planning (MRP)</li> </ul>	<ul style="list-style-type: none"> <li>• Total Quality Management (TQM)</li> <li>• Statistical Process Control</li> <li>• Process Improvement Methods</li> </ul>
Information Age—Phase 2—Process Reengineering	1990's	<ul style="list-style-type: none"> <li>• Process Innovation</li> <li>• <i>Best Practices</i></li> <li>• Better, Faster, Cheaper</li> <li>• Business via the Internet</li> <li>• Speed to Market</li> <li>• Customer Intimacy</li> <li>• Operational Excellence</li> </ul>	<ul style="list-style-type: none"> <li>• Flat Organization</li> <li>• End-to-End Processes</li> </ul>	<ul style="list-style-type: none"> <li>• Enterprise Architecture</li> <li>• Enterprise Resource Planning (ERP)</li> <li>• Customer Relationship Management (CRM)</li> <li>• Supply Chain Management</li> </ul>	<ul style="list-style-type: none"> <li>• Activity Based Costing</li> <li>• Six Sigma</li> <li>• Buy vs. Build</li> <li>• Process Redesign/ Reengineering Methods</li> </ul>
Information Age—Phase 3—Business Process Management	2000's+	<ul style="list-style-type: none"> <li>• Assessment, Adaptability, and Agility</li> <li>• 24x7 Global Business</li> <li>• Continual Transformation</li> </ul>	<ul style="list-style-type: none"> <li>• Networked Organization</li> <li>• Hyper Competition</li> <li>• Market Growth Driven</li> <li>• Process Effectiveness over Resource Efficiency</li> <li>• Organizational Effectiveness over Operational Efficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Enterprise Application Integration</li> <li>• Service Oriented Architecture</li> <li>• Performance Management Software</li> <li>• Business Process Management (BPM) Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Balanced Scorecard</li> <li>• Self Service and Personalization</li> <li>• Outsourcing, Co-Sourcing, In-Sourcing</li> <li>• BPM Methods</li> </ul>

\*PDCA—Plan, Do, Check, Act

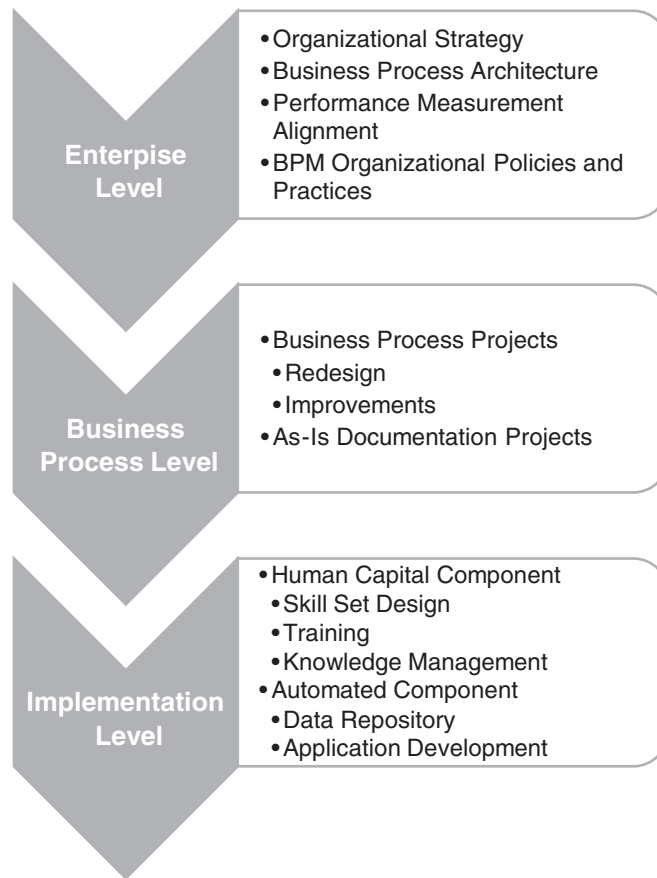
**Table 1.5** BPM methodologies

Methodology	% Used	Description
Lean	34%	Lean is a systematic method for the elimination of waste ( <i>muda</i> ) within a manufacturing system. Lean also takes into account waste created through overburden ( <i>muri</i> ) and waste created through unevenness in workloads ( <i>mura</i> ). Working from the perspective of the client who consumes a product or service, “value” is any action or process that a customer would be willing to pay for. Essentially, lean is centered on making obvious what adds value by reducing everything else.
Six Sigma	20%	Six Sigma seeks to improve the quality of the process output by identifying and removing the causes of defects and minimizing variability in manufacturing and business processes. It uses a set of quality management methods, mainly empirical, statistical methods, and creates a special infrastructure of people within the organization who are experts in these methods. Each Six Sigma project carried out within an organization follows a defined sequence of steps and has specific value targets.
Combined Lean Six Sigma	40%	Lean Six Sigma is a methodology that relies on a collaborative team effort to improve performance by systematically removing waste by combining lean manufacturing/lean enterprise and Six Sigma to eliminate the eight kinds of waste ( <i>muda</i> ): transportation, inventory, motion, waiting, overproduction, overprocessing, defects, and skills (abbreviated as TIMWOODS).
Rational Unified Process (RUP)	9%	The Rational Unified Process (RUP) is an iterative software development process framework created by the Rational Software Corporation, a division of IBM since 2003. RUP is not a single concrete prescriptive process, but rather an adaptable process framework, intended to be tailored by the development organizations and software project teams that will select the elements of the process that are appropriate for their needs.
Business Rules Approach	12%	Business rules are abstractions of the policies and practices of a business organization. In computer software development, the business rules approach is a development methodology where rules are in a form that is used by, but does not have to be embedded in, BPM systems. The Business Rules Approach formalizes an enterprise’s critical business rules in a language that managers and technologists understand.
BP Trends Associates Methodologies	18%	A <i>best practices</i> methodology synthesizes the best of various approaches into a coordinated whole. Burlton-Harmon divide process work between an enterprise methodology and a process redesign methodology. At the enterprise level the goal is to create or organize the tools and resources that senior managers and a business process center of excellence will need to manage and coordinate process work throughout the entire organization. Thus, phases in the enterprise effort include organizing strategy and processes, creating a business process architecture, organizing a process measurement system, establishing a process governance system, and aligning processes with other resources from IT, HR, etc.

Continued

Methodology	% Used	Description
Rummler Brache/PDL Methodology	7%	Rummler Brache™ methodology defines 6 phases for BPM to include: Phase 0: Performance Improvement Planning, Phase 1: Project Definition, Phase 2: Process Analysis and Design, Phase 3: Managing Implementation and Change, Phase 4: Process Management, and Phase 5: Managing the Organization as an Adaptive System. PDL Methodology focuses on bridging the requirements gap between business needs and IT solutions, including definition of the business and the drivers for technology.
Process and Enterprise Maturity Model (PEMM™)	6%	The Process and Enterprise Maturity Model (PEMM™) is a corporate roadmap and benchmarking tool for organizations seeking to become process driven organizations. Dr. Michael Hammer introduced PEMM™ in <i>The Process Audit</i> for the Harvard Business Review in April 2007. This provided guidance for immediate application by corporations at any level of process design/redesign.
Case Management Methodology	5%	Case management solutions unite information, documents, process, systems, and people to provide a 360-degree view of case details—often called an electronic case file.
Framework Methodology (eTOM, SCOR)	10%	eTOM—Enhanced Telecom Operations Map is a business process framework for telecom service providers in the telecommunications and entertainment industries. The model describes the required business processes of service providers and defines key elements and how they should interact. SCOR—The Supply Chain Operations Reference model is a supply chain framework, linking business processes, performance metrics, practices, and people skills into a unified structure.
Consulting Company Methodology (CSC's Catalyst)	6%	Catalyst is a set of repeatable processes and techniques for analyzing a business situation and developing and implementing the best solution. It is based on industry best practices and reflects the thinking and experience of CSC employees globally.
CMMI Methodology	17%	The Capability Maturity Model Integration (CMMI) is a process model that provides a clear definition of what an organization should do to promote behaviors that lead to improved performance. With five <i>maturity levels</i> and three <i>capability levels</i> , CMMI defines the most important elements that are required to build great products or deliver great services and wraps them all up in a comprehensive model.
In-House Methodology	34%	Custom in-house developed standards, tools, and practices for managing business processes.

% Used based on BPTrends' *The State of the BPM Market—2016*



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**Figure 1.6** BPM levels

## The IT Perspective

This perspective is where the BA has traditionally been utilized. In fact, most references that were produced regarding business analysis refer to the work done to describe the needs of an automated solution. When the BA is working from this IT perspective, there is likely a high degree of complexity and scope of activities. The initiatives may vary from being very small, in the case of a defect resolution or minor enhancement, to large re-engineering projects. The BA may be working alone on the IT business analysis activities or as part of a team of BAs to help decompose the problem, define goals, and finally define requirements to provide the most appropriate IT solution.

On IT initiatives, there is typically a solution approach that is identified prior to project funding and then defined in the business case. This solution approach is influenced by the enterprise direction for IT endeavors and may be defined in the enterprise architecture. The IT solution approach defines whether

this initiative will be a packaged solution (commercial off-the-shelf—COTS), a custom application built in-house (homegrown), a custom outsourced application (organization specific), an outsourced industry standard solution, or some combination of any of these approaches. The impact to the business analysis effort is whether the system is intended to be user-centric or whether it forces the user to conform their practices to the solution. Typically for a COTS solution, the enterprise has selected this approach to employ a best-in-class tool that has proven functionality that will meet the needs of like enterprises rather than reinvent the wheel. The BA should validate this assumption with the sponsor and the PM and ensure that business stakeholders understand that their processes may change, but their needs will be met. The BA will ensure the solution is able to fulfill the needs of the business, but without dictating the exact steps in the process—otherwise, the BA could be sabotaging the expected gains of purchasing a solution. The detail requirements will be in the configuration of the COTS solution. For custom solutions, the BA will take a user-centric approach, elaborating detailed, concise solution-level requirements.

There is a lot of discussion regarding the technical expertise that the BA should have in order to work in the IT perspective. Generally, if the BA has a technical background, it is easier to communicate with the IT development group, but the downside is to move into *solution mode* before understanding the problem. Successful BAs in the IT perspective could possess any of the following backgrounds:

- Only worked with business users in the past on an IT system
- Designated liaison between the business group and the technical team
- SME who has experience on the current application
- Software user who is aware of the daily activities and focuses on usability
- Business process owner who understands business capabilities and processes but has no technical or IT experience
- Technical person with in-depth technical experience
- COTS representative who will allow customization of the packaged solution while leveraging their knowledge of the vendor's package and past implementation experience

IT initiatives are typically triggered by identifying a new capability to transform the enterprise, achieve objectives (regulatory or policy) that require technology, improve operations, maintain existing IT systems, or repair defective IT systems. These initiatives will likely require focus on multiple IT systems that interact with one another for multiple user groups. This requires high collaboration among the stakeholder groups with the BA being the facilitator to define solution requirements.

Consider the impact of an IT change initiative on other perspectives at play within the organization. Has the process impact been considered? Will the business intelligence be enabled with this change? Is the organization mature enough to utilize the solution to achieve the anticipated value? The BA working in the IT perspective must ensure these considerations are addressed. In some cases, there may be separate BAs working on other perspectives, but usually the BA must address all perspectives.

These perspectives, coupled with an ever-changing IT environment, have a huge impact on the business. This impact is driving an increase in demand for BAs who are in tune with an environment that is evolving at a rapid pace. The major contributing innovations in this decade include:

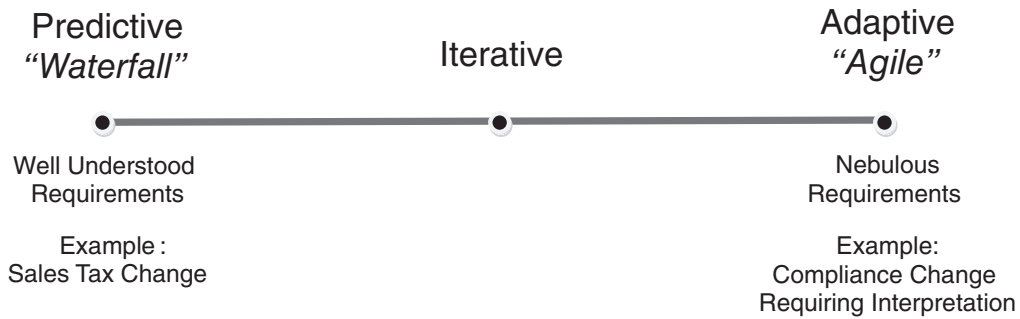
- The cloud computing platform, which provides large, mid-size, or small organizations a seemingly level playing field. Traditionally, organizations were faced with large investments for information

systems that could retrieve, collect, store, and distribute information. Cloud computing offers a flexible platform for those mid-size and small organizations to scale their needs and pay only for what they use. Cloud computing could make or break an organization, depending on how they implement the solution. If implemented correctly, cloud computing may boost the organization to greater success than what was thought possible with the old technology. The BA must understand the risks of improper execution as well as the benefits for this solution approach to define the business analysis information.

- Risks include network dependency, data security, and integration of systems (internal and external to the organization)
- Benefits include cost reduction, increased efficiency, platform flexibility without investment, security gains, and reliability
- On the coattails of cloud computing, the distribution of software has undergone a change. The traditional model provided boxed software or custom applications implemented on-site. Software distribution is moving toward Internet accessibility, known as *software as a service* (SaaS). The SaaS focus has been on maintaining business applications such as accounting, database management systems, messaging software, etc. Similarly, the BA must understand the risks of improper execution as well as the benefits for this solution approach to define the business analysis information.
  - Risks include availability of hosted application, data security and privacy, a stringent regulatory environment, and vendor stability
  - Benefits include cost reduction in personnel and hardware, increased efficiency in deployment, lower initial acquisition cost, no maintenance releases or patches to install, scalability, security gains, and reliability
- The global community is changing the way the Internet is accessed, moving from desktop and laptop access to adding mobile digital platforms, such as smartphones, tablets, smart TVs, watches, etc. There is now a mobile workforce that can work from home, office, restaurants, or while traveling—just about anywhere. This speeds up the information flow, velocity and quality of decision making, exchange of data between systems, collaboration, communication, and location services. It provides the BA with new elicitation, communication, and collaboration vehicles, as well as opportunities for solution design considerations.

Typically, IT projects are designed, constructed, tested, and delivered in a defined life-cycle framework. This framework is known as a systems (or software) development life cycle (SDLC). The BA's approach to elicitation and analysis may or may not follow the SDLC of the solution development team; however, the BA is influenced by the project's SDLC because the BA will support the implementation of a successful solution. There are a number of different SDLC approaches; however, most fall into one of the three categories that are shown in Figure 1.7 and explained here:

- *Predictive approach*: this is typically known as the *waterfall* approach. The predictive approach is a sequential (non-iterative) process in which progress is seen as flowing steadily downward (like a waterfall)—through the phases of conception, initiation, analysis, design, construction, testing, implementation, and maintenance. The predictive approach dictates that one phase is complete, reviewed, and verified before moving to the next phase. Figure 1.8 depicts the phases of the



**Figure 1.7** SDLC spectrum

waterfall approach. The predictive approach is a useful approach when the variables and outcomes of a project are well known. This approach may be an appropriate choice for an organization if:

- The problem, requirements, and solution approach are familiar to the team
- The parameters of the project are stable
- The project team is large
- The project development process is thoroughly documented
- The organization prefers predictability to change
- The PM is inexperienced in other project methodologies

The predictive approach places a great deal of responsibility on the project team to understand and implement requirements. If the BA fails to provide the team with complete and accurate information, the final product will not meet the needs of the organization. Subsequent changes are always more time consuming and costly. Until recently, waterfall was the dominant approach in software development. However, Hewlett Packard (HP) conducted a survey in 2015 and found that this was no longer the case (see Figure 1.9).

- *Iterative approach*: this hybrid of predictive and adaptive approaches is sometimes referred to as an iterative or incremental approach. Due to the hybrid nature of this category, there are many variations in what aspects of predictive and adaptive organizations will choose to utilize. Figure 1.10 depicts this incremental delivery approach, which is also characterized by the following:
  - Overall solution scope is defined up front at a high level
  - Solution scope is split into iterations
  - Iterations are defined in detail requirements, design definition is just-in-time, and documentation typically needs formality and approval
  - Each iteration's work is performed sequentially with some overlap
  - Product is developed iteratively, adding features incrementally
- *Adaptive approach*: this is typically known as the *agile* approach. The adaptive approach allows for prioritization of features (sometimes referred to as user stories or technical debt) to be pulled through an abbreviated SDLC. Figure 1.11 takes the traditional predictive SDLC and turns those phases on their side in an adaptive approach. This allows high-priority features to be delivered in

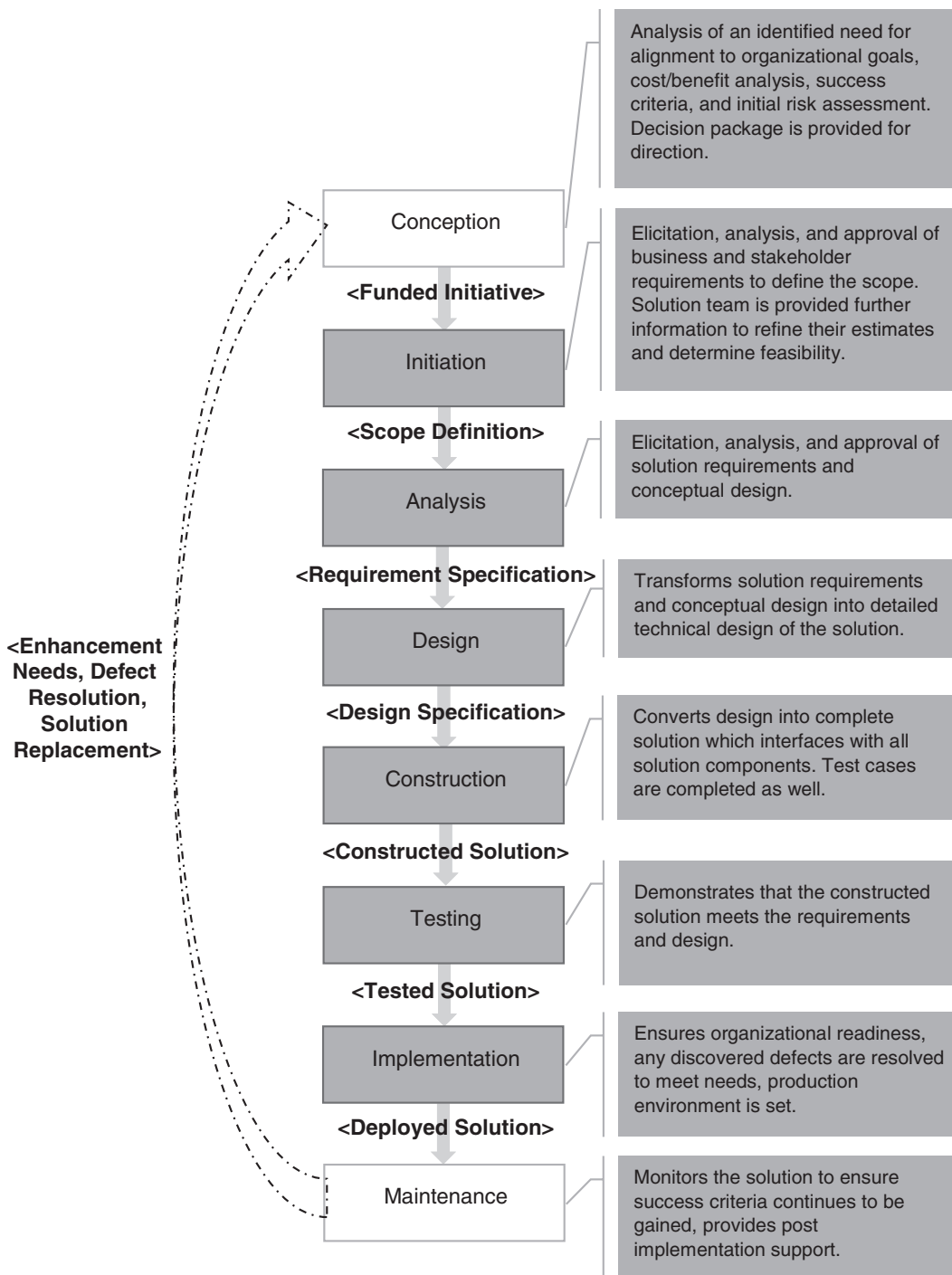
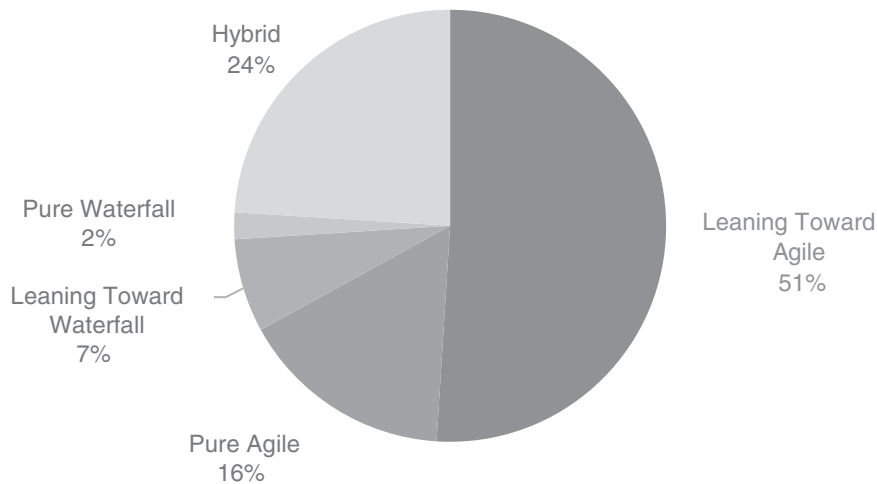


Figure 1.8 SDLC waterfall



### ORGANIZATIONS' REPORTED PREDOMINANT SDLC APPROACH



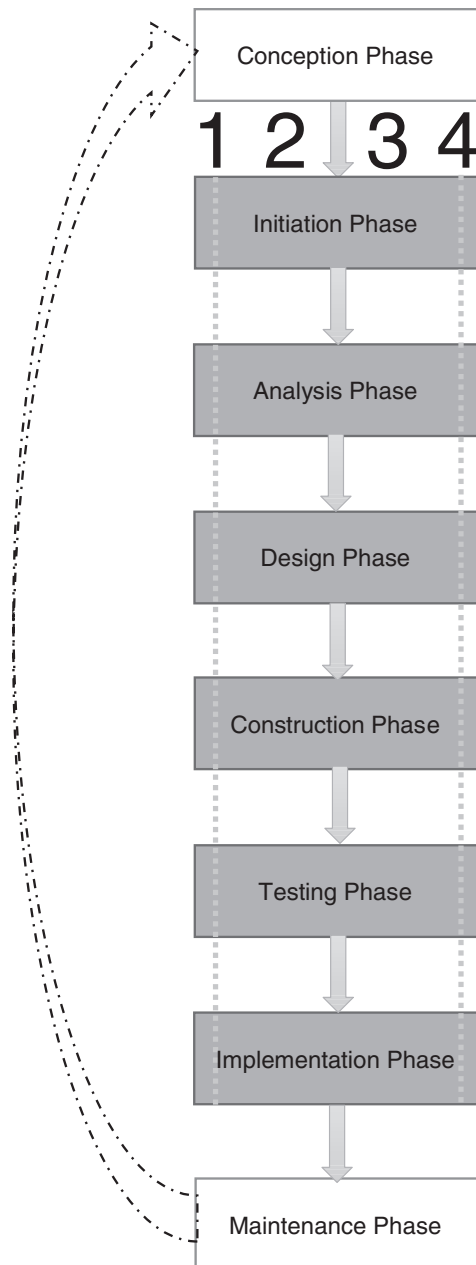
Source: HP online survey of 601 development and IT professionals.

**Figure 1.9** HP survey showing predominant SDLC approach

small iterations, and this process is repeated until the solution is complete (or good enough). This approach is detailed in the Agile Perspective section of this chapter. The adaptive approach may appeal to an organization if:

- The parameters of the project are evolving or undetermined
- The organization adapts easily to change
- The team and/or project is somewhat small
- The timeline is flexible
- The organization represents an industry that is rapidly changing
- There is an experienced PM in this approach

These SDLC approaches provide a framework for IT projects; however, other solution-driven efforts have adopted some of the practices. After all, project management roots are firmly planted in construction and manufacturing arenas, so it is common to encounter these approaches even when IT is not involved. Insight into the selected SDLC approach will help the BA be aware of the influence this may have on the selected business analysis approach, which will be defined in Chapter 4. Table 1.6 provides some insight into which project characteristics might lead organizations to select the predictive or adaptive SDLC approaches for their projects. To summarize this section on SDLC approaches, Table 1.7 depicts a comparison of advantages and disadvantages of predictive versus adaptive SDLC approaches.



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**Figure 1.10** SDLC iterative

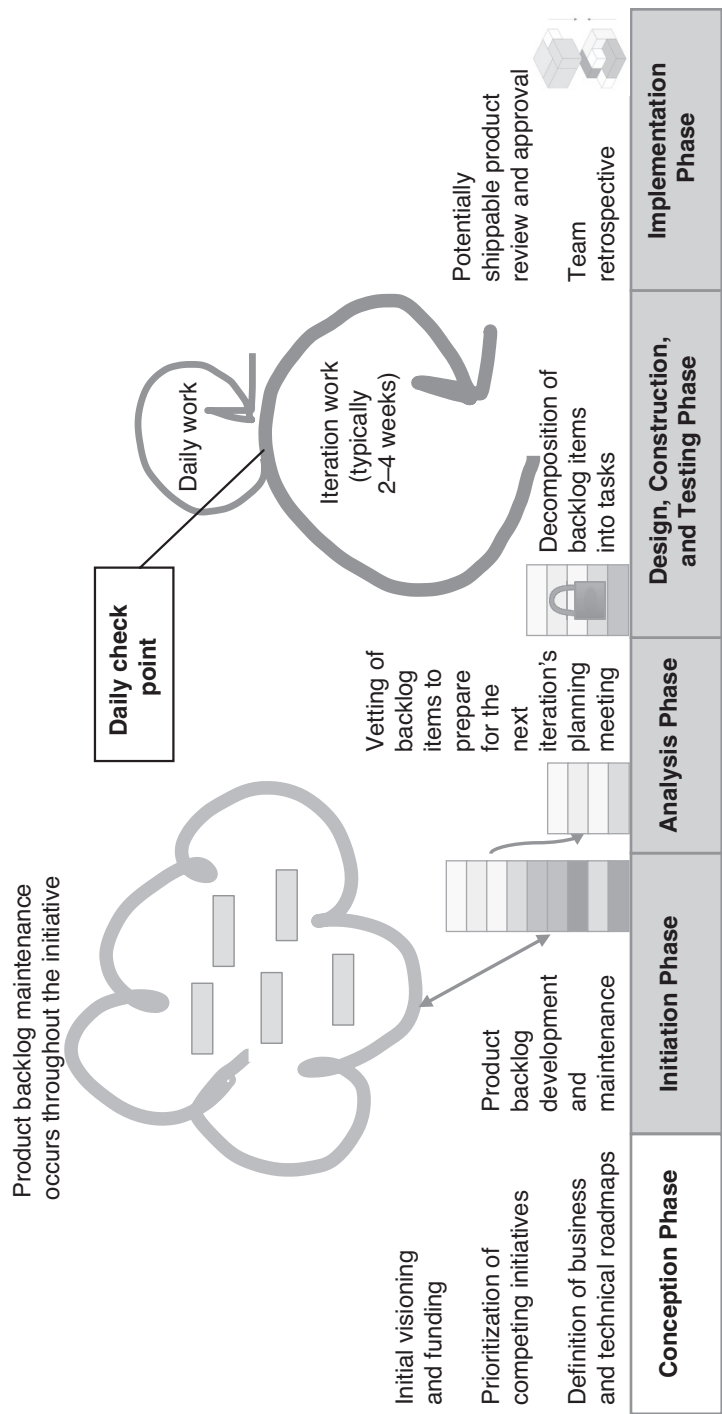


Figure 1.11 SDLC adaptive

**Table 1.6** Project characteristics impacting SDLC approach

Project Factors	Status	Not a Factor	Adaptive	Predictive
Project Size	Small	X		
	Medium	X		
	Large	X		
Stakeholder Availability	SMEs and decision makers are available throughout the project	X		
	SMEs and decision makers cannot commit to extensive involvement			X
Interface Complexity (Internal and External)	Simple and identified	X		
	Unidentified, numerous, or complex		X	
Tolerance for Scope and Cost Changes	Flexible in budget and schedule (even encouraged)		X	
	Budget and/or schedule are fixed or difficult to change			X
Time to Market	Rapid deployment is required, even with limited features available		X	
	All solution features must be delivered within a set time frame			X

## The Business Architecture Perspective

This perspective takes us out of the project-based or change initiative-based business analysis work and defines the enterprise, organization, single-functional division, or line-of-business direction. Business architecture is not a solution, but rather a tool. Through this business architecture definition (known as a blueprint), executives and management are provided a common understanding of the enterprise for the purpose of aligning strategic objectives with tactical demands. When considering this purpose of strategic alignment with day-to-day activities and change initiatives at play, the BA (or the business architect) is challenged to identify: (1) where to start, (2) how long this effort will take, and (3) how to continually show business architecture value to the enterprise—especially when times are lean. So, let's examine these three aspects of this perspective.

First of all, the business architect should answer the questions in Table 1.8 to drive components of the business architecture. Next, decide on how to capture the information—or as the business architecture community would put it—what *blueprint* is being used? If the BA is working in an enterprise architecture group, it may make sense to weave the business architecture blueprint into the chosen enterprise architectural framework. Table 1.9 depicts the three leading enterprise architecture frameworks and an

**Table 1.7** Pros and cons of predictive and adaptive SDLC approaches

<b>Predictive Approach</b>	
<b>Advantages</b>	<b>Disadvantages</b>
Time spent early in the software production cycle can reduce costs at later stages.	Business stakeholders may not know their requirements before they see the solution, hence requirements change which requires revisiting design, constructed solution, deployed solution, and testing which equals increased solution cost.
Clearly defined procedures and controls that allow for regulating every aspect of the project.	Designers may not be familiar with new software or a feature that may reveal future constraints, requirements, or other problems. This may require revision of the design.
Emphasizes documentation (requirements specification, design specification, and source code) which provides for knowledge transfer as needed.	
This structured approach progresses in a linear fashion through understandable phases with identifiable milestones.	
<b>Adaptive Approach</b>	
<b>Advantages</b>	<b>Disadvantages</b>
Provides for scope flexibility to accommodate business needs. As functionality is created, the business is able to see the costs and remove any non-essential features or add new features.	Crucial documentation may not be kept up-to-date based on decisions made in team discussions.
Product owner continuous feedback is provided as iterations (typically 1–3 weeks) are being developed and tested. This approach provides end users visibility to the solution quicker, which allows for course correction with less expense.	Due to the immediate feedback, scope can easily be increased beyond the funded vision.
Fewer defects exist in the final product due to the iterative cycles of develop, build, and test, increasing the test coverage. This increases the level of quality in organizations' solutions.	Pricing is not fixed, thus the business is only provided estimates.
Greater communication as the business stakeholder involvement is required for this approach.	Business stakeholder resource availability may be scarce and put a strain on the business community. Poor stakeholder engagement directly affects product quality.
Project transparency provides all stakeholders with an understanding of work being done.	The agile flavors, lingo, or processes may be challenging to all stakeholders. The learning curve is steep and constant.
Increased collaboration between teams that typically do not work together.	
Increases customer satisfaction.	
Shortens time to market.	

explanation for parsing out the business architecture component. There is a plethora of other frameworks developed through the following categories:

- *Consortium-developed frameworks*: developed by an association of two or more individuals, companies, organizations, or governments (or any combination of these entities) with the objective of developing common enterprise architecture
- *Defense industry frameworks*: developed by the U.S. Department of Defense
- *Government frameworks*: developed by the U.S. government
- *Open-source frameworks*: developed at no cost to the licensed user in which the copyright holder provides the rights to study, change, and distribute the software to anyone and for any purpose; may allow for development to occur in a collaborative public manner
- *Proprietary frameworks*: enterprise architecture frameworks defined as a company's intellectual property and protected through legal devices such as patents, trademarks, or copyrights.

Business architecture is not developed overnight. Assess the enterprise's experience and key stakeholders' experience with developing an enterprise architecture or a business architecture. In many organizations an architecture stigma exists. The traditional view is that business architects sit in their *ivory towers* and define theoretical views that are so far removed from the business that the architecture definition is perceived as a waste. To combat this perception, communication and demonstration of value will be key for this extended effort. A business plan and business case should be developed with realistic time frames. At a large financial institution, an effort for the enterprise business architecture development team was funded with the expectation that the full rollout and value realization would take two years. Executive support was obtained and through frequent communication and small wins along the way, the effort was

**Table 1.8** Questions targeting business architecture component discovery

Questions to be answered	Business Architecture Model Components								
	Capabilities	Value	Processes	Information and Data	Organization	Reporting and Management	Stakeholders	Securities Strategy	Outcomes
What does the business do?	X		X	X					X
Why is the business doing the things it does?		X							X
Who is doing these things and to whom?			X		X		X		
How are these things being done?			X			X		X	X
Where are these things being done?					X			X	
How do all the things tie together into a common view?				X				X	X
What information is being used?			X	X		X		X	
Who uses the information?							X	X	
Is there any consistency in terminology?				X					

**Table 1.9** Top enterprise architecture frameworks

EA Framework/ Approach	Description	Business Architecture Component
<b>Zachman Framework (1987)</b>	The framework provides ontology of fundamental enterprise concepts that are defined from the intersection of six probing categories (what, how, where, who, when, and why) and six viewpoints (executive, business management, architect, engineer, technician, and enterprise).	The business architecture component defines the concepts associated with the top two viewpoints: <ul style="list-style-type: none"> <li>• Executive viewpoint is concerned with the scope and context of the business</li> <li>• Business management viewpoint is concerned with business definition models</li> </ul>
<b>The Open Group Architectural Framework (TOGAF–2003)</b>	TOGAF divides the enterprise architecture into 4 categories: <ol style="list-style-type: none"> <li>1. Business architecture</li> <li>2. Application architecture: describes how applications are designed and interact with applications</li> <li>3. Data architecture: describes how the enterprise data stores are organized and accessed</li> <li>4. Technical architecture: describes the hardware and software infrastructure that supports their interactions</li> </ol>	The business architecture category defines business processes used to meet organizational goals. This business architecture drives the applications used, data needed for business decisions, as well as the technical infrastructure required to support data stores and applications.
<b>Gartner Enterprise Architecture Practice (2005)</b>	This practice is heavily weighted toward defining a future state and everything working toward that outcome. Gartner believes that enterprise architecture is about bringing together three constituents: business owners, information specialists, and the technology implementers. If you can bring these three groups together and unify them behind a common vision that drives business value, you have succeeded; if not, you have failed.	The business architecture portion of this practice focuses on representing the business owner constituents' future state definition.

completed. Developing business architecture at the organization, single functional division, or line of business levels could take considerably less time.

The BA working from the business architecture perspective should be ready to justify his/her existence at all times. Hence, an elevator pitch is helpful to have rehearsed. To craft this elevator pitch (or value statement), focus on understanding the enterprise and stakeholder motivations along with these general business architecture values:

- Providing the enterprise with a view that will help identify opportunities for rationalization, optimization, and leveraging existing competencies of the enterprise
- Exposing root cause problems by providing transparency of dynamics and interdependencies within the organization
- Demonstrating strategic alignment through traceability with implemented capabilities
- Providing a better way to balance risk and opportunity more effectively
- Providing a better way to conduct impact analysis of a change, thus unearthing hidden costs sooner
- Formalizing institutional knowledge

# The Agile Perspective

This perspective provides insight into how business analysis is performed where change is enabled in a nimbler environment than traditional frameworks. The term *agile* is used generically to include many approaches that have developed over time. Some examples of approaches that are currently in use as identified by practitioners are depicted in Figure 1.12. The BA can expect to encounter any of these approaches on change initiatives.

First, a little background on this agile framework. Since the late 1950s, there has been a recognition in software development practices that incremental development is valuable. In the 1970s, evolutionary gains were made in project management and adaptive software development practices. However, as the 1990s emerged, projects were laden with methods and documentation, highly regimented, and micro-managed. During this time, the dot-com era emerged with a race for Internet presence and to be first to market, which allowed these new business drivers to become prominent. In 2001, a group of software developers (recognized leaders in the field) met to discuss “light-weight” software development methods. They coined the term that these approaches would be referred to as *agile* and created the *Agile Manifesto*, in which they said that by *uncovering better ways of developing software and helping others do it*, they have come to value “individuals and interactions over processes and tools, working software over

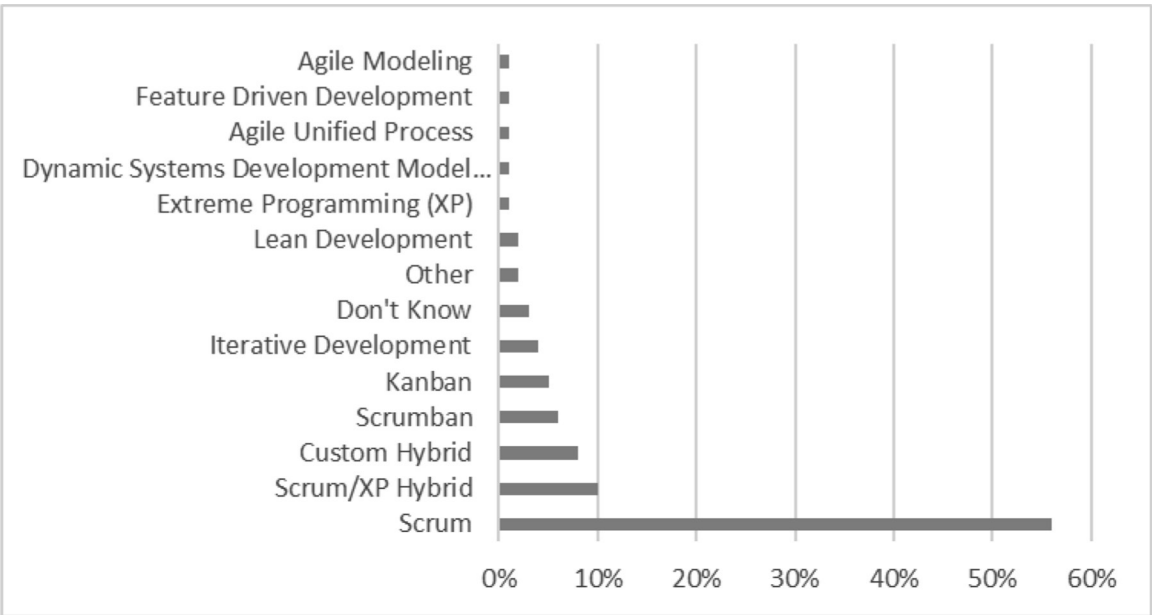


Figure 1.12 Agile approaches being used



comprehensive documentation, customer collaboration over contract negotiation, and responding to change over following a plan.” The *Agile Manifesto* is based on 12 principles:

1. Customer satisfaction by early and continuous delivery of valuable software
2. Welcoming changing requirements, even in late development
3. Working software is delivered frequently (weeks rather than months)
4. Close, daily cooperation between business people and developers
5. Projects are built around motivated individuals who should be trusted
6. Face-to-face conversation is the best form of communication (colocation)
7. Working software is the principal measure of progress
8. Sustainable development; able to maintain a constant pace
9. Continuous attention to technical excellence and good design
10. Simplicity—the art of maximizing the amount of work not done—is essential
11. Best architectures, requirements, and designs emerge from self-organizing teams
12. Regularly, the team reflects on how to become more effective, and adjusts accordingly

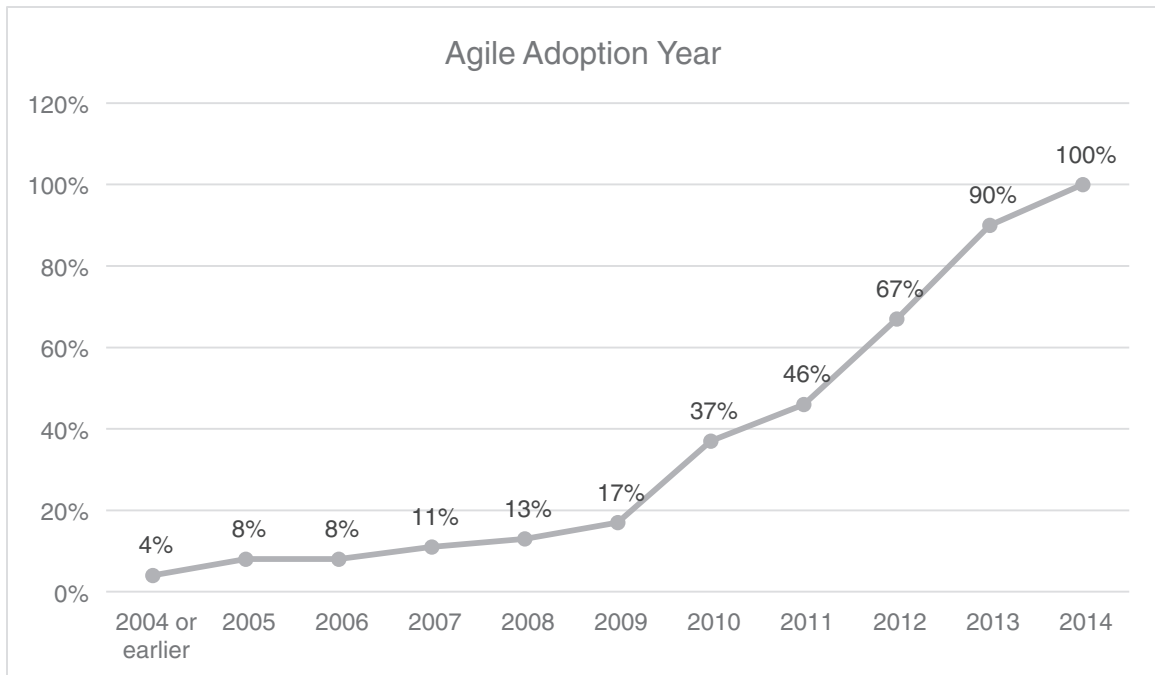
Over the years, agile methodologies have progressed with time (see Table 1.10).

**Table 1.10** Evolution of agile approaches

Agile Approach	First Introduction	Gained Recognition	Brief Description
<b>Extreme Programming (XP)</b>	1960's NASA	Mid-1990's	Name was coined by taking beneficial software engineering techniques to the extreme. The focus is on the technical development processes and features pair-programming, test-driven development, and other expertise approaches to the technical practices. XP technical practices are used in conjunction with other agile management frameworks.
<b>Scrum</b>	1986	Mid-1990's	A lightweight framework based on empirical process control. Work is done in a series of fixed length iterations, called sprints, with fixed durations of one month or less. At the end of each sprint the team demonstrates working software of a high enough quality that it could potentially be shipped or otherwise delivered to a customer.
<b>Lean Information Technology (Lean IT)</b>	1993	2007	A philosophy focused on improving flow of work, managing risk, and improving (management) decision making. This philosophy complements other Agile approaches.
<b>Dynamic Systems Development Model (DSDM)</b>	1994	2007	A project delivery framework focused on fixing cost, quality, and time at the beginning while contingency is managed by fluctuating the features to be delivered. The most used prioritization technique is based on MoSCoW (must, should, could, won't) for scope management. Time boxes (short, focused periods of time with clearly defined outcomes) manage the work.

*Continued*

Agile Approach	First Introduction	Gained Recognition	Brief Description
<b>Crystal Clear</b>	1995	2004	A part of the Crystal methodology family which are defined based on hardness and color. Hardness is about business criticality (potential for causing harm), which applies more rigor and predictive planning as the criticality increases. Color is about the project heaviness across many dimensions including the number of people required and risk elements in the project.
<b>Evolutionary Project Management (EVO)</b>	1996	1999	A project management method that focuses on developing and delivering a system incrementally. It has a strong emphasis on quantifying value for stakeholders and planning increments based on measurable value. EVO employs impact estimation tables as a formal technique for assessing solutions' value to stakeholders within the given cost.
<b>Feature Driven Development (FDD)</b>	1997	2002	An approach which derives a client valued functionality to develop working software. For example, decomposing high-level scope and developing a feature list which drives planning, design, and development based on these feature sets.
<b>Agile Modeling (AM)</b>	2000	2005	A methodology for modeling and detailing software systems based on best practices. AM can be applied on an (agile) software development project. This methodology is more flexible than traditional modeling methods, supporting a fast-changing environment. It is a part of the agile software development tool kit.
<b>Agile Unified Process (AUP)</b>	2002	2005	This framework is a simplification of the Rational Unified Process (RUP) by IBM. The AUP applies agile techniques including test-driven development, AM, agile change management, and database refactoring to advance productivity.
<b>Kanban</b>	2004	2010	This methodology does not require fixed iterations, rather work moves through the development process as a continuous flow of activity. A key feature is to limit the amount of work in progress at any one time. The team works only on a fixed number of items and work begins on a new item when required to maintain flow downstream and after the previous item has been completed.
<b>Disciplined Agile Delivery (DAD)</b>	2006	2011	A decision process framework which is intended to support a project from initiation through delivery. DAD incorporates principles from a variety of other agile approaches. DAD is not prescriptive and allows for teams to customize their own life cycles and approaches that supports initiation through delivery.
<b>Scrumban</b>	2009	2013	As the name reflects, this approach combines aspects of Scrum and Kanban to allow teams to employ Scrum as their chosen way of working and use the Kanban Method to understand work flow and continuously improve.
<b>Scaled Agile Framework® (SAFe)</b>	2010	2011	A framework for scale agile practices to support enterprise level implementations. Highlights include individual roles, teams, activities, and artifacts required to scale agile from the team to program to the enterprise level.



Source: HP online survey of 475 development and IT professionals with some adoption of Agile Methods.

**Figure 1.13** Agile adoption over time

The BA today will likely be assigned a change initiative in which agile methods are being employed in combination with any of the previous perspectives. The agile movement has progressed from infancy to teenager and is now that young adult going about day-to-day involvement in contributing to society. Figure 1.13 represents the timeline of agile adopters in an HP survey conducted among 475 IT professionals. Between 2010 and 2014, there was a sharp acceleration in the adoption of agile methods.

Agile could be considered disruptive to many traditional IT roles. Consider the following traditional role shifts as software development engages agile approaches (see Table 1.11). BAs have an opportunity to be effective members of agile teams because they clearly have value to add, but they need to be prepared to rethink their approach to business analysis. This agile approach includes a greater focus on collaboration, knowledge sharing, and skills transfer. The agile perspective requires BAs with greater flexibility, greater discipline, and the willingness to work in an evolutionary manner.

The *Agile Extension* to the *BABOK® Guide* provides a summarization of the following business analysis principles to employ on agile initiatives:

- When engaged in discovery:
  - See the whole
  - Think as a customer
  - Analyze to determine what is valuable

- When engaged in delivery:
  - Get real using examples
  - Understand what is doable
  - Stimulate collaboration and continuous improvement
  - Avoid waste

### In Real Life . . .

I had the opportunity to deliver an agile business analysis course to 25 university employees and consultants who were involved in implementing a suite of applications to support their core business processes (a.k.a. enterprise resource planning—ERP). Regretfully, I was unable to engage leadership prior to the delivery; thus, I went in cold regarding the participants' goals, agile experience, and backgrounds. The room was configured in pods in order to facilitate hands-on group activity. As we went through the introductions and individual goals at the first table, it became painfully obvious that their agile experience had ended in chaos, wasted effort, and finger pointing, which was of no value to the university. Before the class, I had written on flip charts the 12 Principles of Agile and the 7 Business Analysis Principles on Agile Projects. We stopped at that point and discussed which of the principles were followed on their project. They identified that *none* of the principles were followed on their project. The lesson learned here is that even agile requires structure and value management.

**Table 1.11** Role changes within agile

Traditional Role	Traditional Responsibilities	Agile Role	Agile Responsibilities	Initial Disruption
Project Manager	Dictate tasks	Scrum Master, Coach, Tracker	Servant leadership removing team obstacles	Ego stature erosion.
Developer	Build solution by detailed approved requirements	Team Member	The team members all contribute to the analysis, design, build, and testing of the solution. Provide daily status of progress.	Final hour achievements no longer rewarded, rather accountable.
Tester	Test solution by detailed approved requirements and technical design	Team Member		No formal documentation to test.
Business Analyst	Gatekeeper to ensure all communication between the business and solution providers is disseminated through the BA. Boiler-plate formal documentation.	Team Member, Product Owner, Scrum Master	Provide just enough information just in time through a conduit that opens the lines of communication. This role becomes the <i>Value Manager</i> .	Is the BA role needed—after all, the business is involved and can provide needs.

These five perspectives do not presume to represent all of the possible perspectives from which business analysis is practiced. These perspectives are further discussed in the *BABOK® Guide* and represent some of the most common contexts of business analysis.

## KEY BUSINESS ANALYSIS TERMS, CONCEPTS, AND DEFINITIONS

As in any profession, there is jargon used by those working in the field. In some cases, these words will vary across industries and organizations and other times the same word will be used to mean different things. This complicates the writing of a book like this while trying to ensure that the meaning is clear. In this section, the goal is to provide some clarity to key business analysis jargon.

### What Is a Requirement *Versus* Design *Versus* Business Analysis Information?

The BA is expected to communicate solution needs and direction. What is this output called? Traditionally, we have described these as *requirements* because customarily, the BA worked in the IT perspective. A requirement is defined as a condition or capability that is necessary and is a usable representation. A requirement represents what is needed for a product, service, or result. In reviewing business analysis literature, you will discover that there isn't any direction regarding how to format a requirement for every business analysis effort. The BA is free to use any format that will convey the need, condition, or capability in such a way as to promote understanding for all stakeholders. Some examples of the formats used to express requirements include:

- A sentence (as in “The system shall . . . )
- A structured sentence (as in a business rule)
- A table or spreadsheet (as in a decision matrix)
- A diagram (as in a workflow)
- A prototype or simulation (as in a screen mock-up)
- A graph (as in acceptance criteria)

Most seasoned BAs have lived by the mantra that “My job is to define the *what* not the *how*—the *how* is the design.” As the business analysis perspectives grow beyond just the IT perspective, the line begins to blur between requirement and design, but a few things hold true:

- Requirements are independent of the design
- There may be (and likely are) multiple designs that could realize the requirements
- There is (and always has been) a difference between the conceptual design and technical design

While a requirement is focused more heavily on the needs of the stakeholders, design is more focused on the solution and examining the value of building a solution. The design focuses on understanding *how* the solution may realize intended value. The design representation may be a document (or set of documents) or whiteboard capture and can vary widely depending on the circumstances. It could be argued that the BAs working in the IT perspective over the years have performed conceptual design since they produced prototypes, report mock-ups, data mapping, and process modeling—all of which do dictate design, but

not the actual technical implementation design. Prerequisites when it comes to elaborating this conceptual design are: (1) a clear understanding of the need, (2) actors' motivations, (3) some level of functionality involved, and (4) some level of understanding of the information received, transformed, and provided. So, there is some level of requirement understanding prior to developing the design.

With these definitions of requirements and design, it is easy to see that one person's design may be considered another person's requirement. Both requirements *and* design may be high level or low level depending on the purpose for consuming the information. Let's face it, most folks discuss the *why* and the *what* in the context of the *how*, so this elicitation and collaboration is an iterative and recursive discussion of requirements and design. The BA must consider what formats and level of detail will be most appropriate based on the audience, context, and purpose for communicating the information. Table 1.12 provides some examples to differentiate requirements and design.

This leveling of requirements and design provides BAs an opportunity to express the decomposition of requirements and design definition. In the subsequent paragraphs, we provide BA standards for naming these levels and types of business analysis information. Based on the industry and organizations, these labels may vary—just ensure that the aspects of level and type are captured in your variation. The important aspect of creating the levels and types is that it forces decomposition (high to low levels) and reminds the BA to elicit and elaborate the different types of requirements. Without these levels and types, the BA is less confident that a thorough analysis is complete.

#### **In Real Life . . .**

I was working as a business strategist on a multi-year initiative to reinvent the way the organization did business. In the initial discovery workshop, we reached a consensus on a functional decomposition of their business. To accomplish this, we had the business define their important aspects of mortgage processing on 4×5 inch yellow sticky notes. These sticky notes were arranged in a hierarchical fashion, which provided four major domains (chunks) that were further defined beneath each domain to elaborate the mid-level elements. This provided us a big picture perspective of functionality and dependencies, and then allowed us to iteratively attack this large-scale initiative. We called it the *Yellow Box* diagram with our stakeholders.

Two years into the project, one of the stakeholders came by my desk and asked if I still had the *Yellow Box* diagram because he needed to come out of the weeds and see where this piece he was working on fit into the whole. Luckily, I still had it so he could make the connection. This project was following an iterative methodology, but decomposition is valuable for all frameworks.

Decomposition of requirements (sometimes referred to as levels, types, classifications, or categories of requirements) includes:

- *Business requirements*: describe *why* the business wants/needs the solution. Some stakeholders may consider these to be goals or objectives. These business requirements are the justification for engaging in these change initiatives—not the solution.
- *Stakeholder requirements*: describe *what* the stakeholders (particularly the users) will need to do. These stakeholder requirements are likely a functional decomposition of the solution into defined

**Table 1.12** Examples of requirements and design

Requirement	Design
The system will provide payroll processing for employees.	The solution approach is to outsource the payroll processing with a specialized vendor.
If the required submitted company information is complete, then update information, or else provide error.	Screen mock-up of incomplete submitted company information with error depicted.
The system will provide a view of aged accounts receivable.	Dashboard sketch of aged accounts receivable.
The organization must provide a strategic view of its enterprise.	Defined enterprise architecture framework.
The system will streamline the accounts receivable process by automating the payment receipt steps in the process.	Update to accounts receivable clerk's standard operating procedures.
The system will ensure all contract negotiations are progressing through the contracting life cycle.	Creation of the contract champion role and responsibilities within the organizational structure.

goals that the users would expect to have fulfilled through the solution. The stakeholder requirements should trace to the business requirements in order to ensure that there is fulfillment of the goals as well as to reduce the risk of over-building a solution that was not funded or intended.

- **Solution requirements:** describe the functions and features that are required of the solution at a level that allows for the development of the solution. These solution requirements trace to the stakeholder requirements. These solution requirements are typically categorized further into:
  - **Functional requirements:** describe actor behavior and the information (data) being managed. When we consider actor behavior, there is likely some aspect of information involved whether that is creating new data, reading/reviewing data, updating data, or deleting data (referred to as CRUD functions). This category is likely further divided between process, data, and rules.
  - **Nonfunctional, quality of service, or product quality requirements:** describe the conditions that the system must maintain along with the system qualities. There are many categorization schemes of these nonfunctional or quality of service requirements. The categorization scheme will vary based on a number of conditions such as the methodology being used, business analysis perspective, enterprise industry, enterprise environmental factors, organizational process assets, organizational systems, project type, etc. The categorization scheme should be flexible enough to meet the enterprise needs; however, some categorization is important in order to ensure the BA has not missed any requirements. For instance, if the BA has this classification scheme, it becomes a reminder that during elicitation and analysis, these types of requirements must be considered. A common scheme depicted in the *BABOK® Guide* includes:
    - **Availability:** measures the operability and accessibility required for users—often expressed in terms of percent of *uptime* or *downtime*
    - **Compatibility:** measures the operational effectiveness of the solution with other components in the environment

- **Functionality:** measures the degree of meeting the user's needs, including suitability, accuracy, and interoperability
- **Maintainability:** designates how easy it is to correct a defect or to modify the software and is necessary for software that will undergo frequent revisions or is being built quickly
- **Performance efficiency:** measures how well a solution or component performs its designated functions with minimum consumption of resources and is often expressed as *response time*
- **Portability:** includes the effort required to migrate a piece of software from one platform to another and internationalizing and localizing the software
- **Reliability:** measures the probability of the software executing without failure as a percentage of operations that should complete correctly or the average length of time the system should run before failing
- **Scalability:** measure of a system's ability to grow over time in order to accommodate more data, processing capacity, handle increased amounts of work, etc.
- **Security:** includes ways to protect solution content or solution components from accidental or malicious access, user authentication and access, modification, destruction, protection, or disclosure
- **Usability:** includes the ease with which a user can learn to use the solution, organizational user interface design standards, and consistency with other systems in use
- **Certification:** includes limitations on the solutions that are required in order to meet standards or industry conventions
- **Compliance:** includes constraints and limitations associated with regulatory, financial, or legalities based on the context or jurisdiction
- **Localization:** includes local languages, laws, currencies, cultures, spellings, and other contextual characteristics of users based on the context of the initiative
- **Service level agreements:** formally agreed-upon constraints of the solution by both the provider and the solution user
- **Extensibility:** measures the ability of a solution to integrate new functionality

These types of requirements should trace to the functional or stakeholder requirement in which they should be realized. If no trace exists, this requirement is an orphan, so to speak, and will never be initiated.

- **Transition requirements:** define the *temporary* capabilities that are essential to migrate from the current state to a future state environment. Requirements that fall into this category include conversion of data from the current system, ongoing work of parallel systems, business continuity, process changes, and training needed to address skill gaps.

Other types of requirements that the PM is responsible for managing include:

- **Project requirements:** define the actions, processes, and other conditions that the project needs to satisfy. These requirements focus on the execution of the work required to deliver the solution.
- **Quality requirements:** define the criteria needed to ensure completion of project deliverables and demonstrate compliance with identified standards and quality metrics. A deliverable is a unique



and verifiable work product or outcome that is required to be provided to stakeholders upon completing a process, phase, iteration, project, or initiative. Quality requirements are associated with project quality, while nonfunctional requirements are associated with product quality.

- *Program requirements*: define the specifications and outcomes for successful implementation and delivery of the program benefits.

Decomposition of design to satisfy requirements:

- *Solution approach*: defines the design direction that the enterprise will use to realize the solution to the problem needing to be solved or preventing the opportunity to be exploited. Through this solution approach selection, the business case is better informed to estimate the cost of the solution; hence, this is not a detailed analysis of vendors if the solution approach is a COTS packaged solution—rather a rough order of magnitude (ROM) may be derived for financial analysis. Certainly, a custom IT build is estimated at a higher cost than a COTS solution. The analysis of the solution approach requires definition, verification, and validation of business and stakeholder requirements to ensure the selected solution approach(es) are the best fit to meet stakeholder needs.

Typical solution approaches include:

- *Build*: this approach seeks to create a custom solution to meet the need. An expert (in-house or contracted) will assemble, construct, and develop the solution. This approach includes modifying an existing solution and seeks out the most user-centric approach to the solution.
- *Buy*: this approach seeks to purchase a product or service that is owned by and maintained by a third party (vendor). The solution components are selected from a set of offerings that most closely fulfill stakeholder needs. This approach assumes that a best-in-class solution is being procured; hence, the users will adjust their processes to accommodate the solution.
- *Combination of build and buy*: this approach recognizes that some components are bought while some aspects will need to be created.
- *Process improvement*: this approach allows for actor (human and non-human) processes to be changed in order to reach a more efficient solution.
- *Organizational structure redesign*: this approach is identified due to recognition that the existing organizational structure is preventing its ability to adopt and adapt to change. The organizational structure may be too complex or too simple to allow a solution to perform effectively. BAs must consider informal relationships in addition to the formal structure. In addition, the chosen organizational structure was likely created to ensure that interactions with external parties (customers, vendors, and regulators) are supported. In an organizational redesign, it is easy to keep the focus internal to the organization, so the BA should ensure that these external interactions will be supported.
- *Design options*: provide guidance for *how* the requirements are realized by the solution or solution components. Design options are typically more tactical and multiple options may be explored to meet the requirements. This exploration will likely promote additional questions and encourage the iteration through requirements analysis. Through these design option communications, there

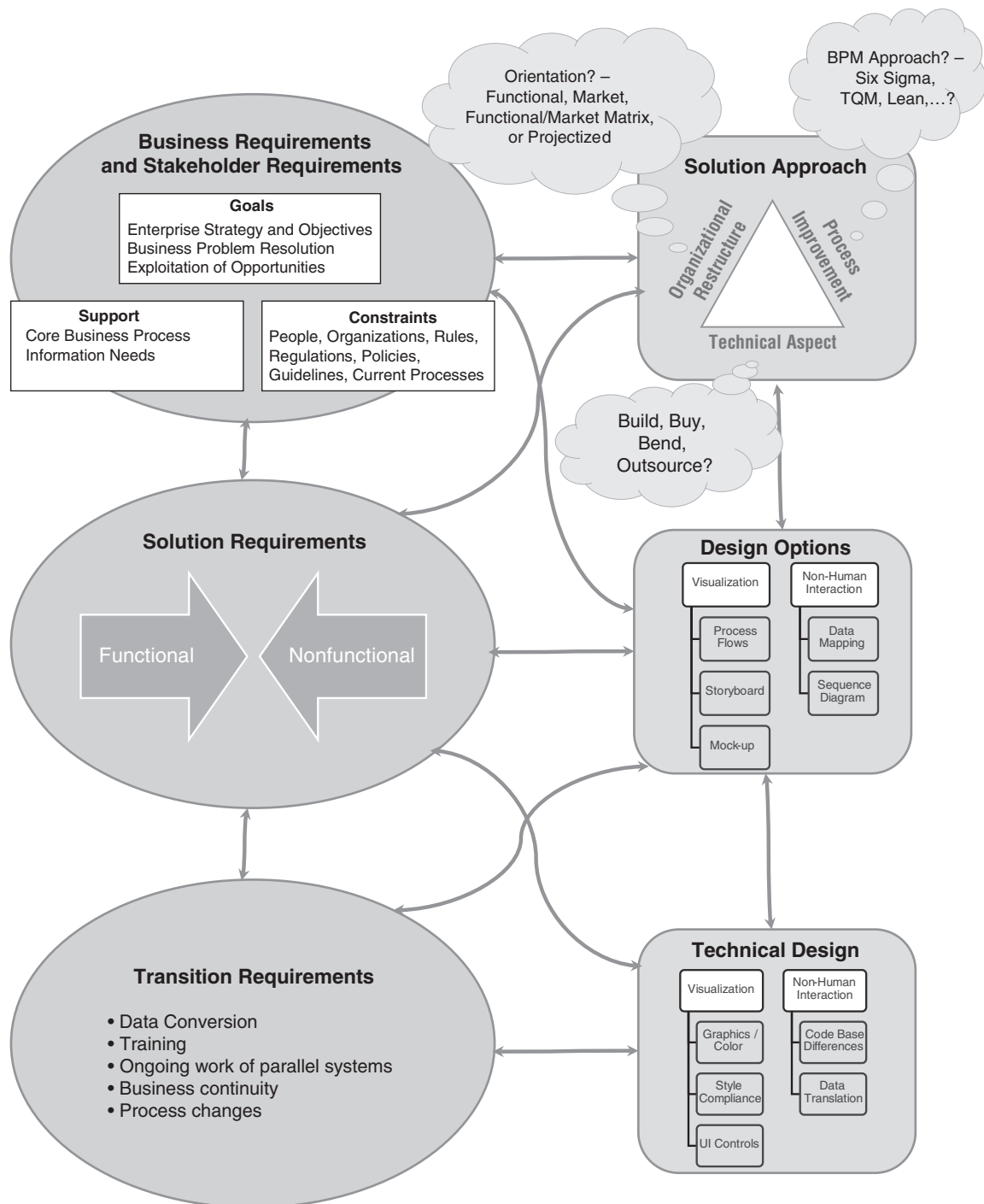
are likely trade-offs and negotiations that the BA will facilitate. Figure 1.14 depicts this iteration of requirements and design. Some examples of design options elaboration include:

- Solution visualization (low fidelity)
  - Report mock-up
  - Screen flow (storyboard)
  - Screen mock-up
- Solution visualization (high fidelity)
  - Screen design
- Non-human actor interface
  - Data mapping
  - Sequence diagrams

Business analysis information comprises all of the information BAs elicit, create, compile, and disseminate—any kind of information at any level of detail that is used as an input or output to business analysis work. Going forward in this book—as well as the IIBA and PMI definition—the term *business analysis information* will refer to any information that is used by or produced by the BA. Examples of business analysis information include elicitation results, requirements, assumptions, constraints, dependencies, risks, issues, designs, solution scope, collaboration decisions, and change strategy. In cases where specific types of business analysis information should be referenced, that specific type will be identified.

Before moving to the next concepts, it seems appropriate to discuss some generic risks that would affect the business analysis information effort. The BA and project leaders (the sponsor and the PM) should review these risks and assess the likelihood of an impact to the initiative. Those risks in which the likelihood and/or impact is high must have an agreed-upon course of action should these emerge during the business analysis effort. Some risks to review include (but are not limited to):

- *Insufficient stakeholder involvement*: consider communicating the level of engagement required for a successful solution with stakeholders, along with an escalation plan due to unavailability. This *engagement-level agreement* is likely more valuable than the business analysis information sign-off to the initiative.
- *Creeping user requirements*: ensure the scope definition (to include business and stakeholder requirements and solution approach) is clearly defined. Change will occur; however, when it does, the BA will identify the new user request as scope creep and follow the *change control process* to either update scope or remove the new request. Scope creep occurs when features and functionality are added without addressing the effects on the timeline, costs, and resources; or adding scope without the customer's approval. Scope creep can include product scope or project scope.
- *Ambiguous business analysis information*: ambiguity reveals itself when multiple readers have a different understanding of the same information. The BA should engage stakeholders in *iterative, informal reviews* of the requirements. Of course, the BA is not intentionally writing the requirements to be ambiguous. Only during these discussions will ambiguous requirements reveal themselves.
- *Gold-plating*: gold-plating is akin to creeping user requirements; however, gold-plating could come from the business stakeholders or solution stakeholders. Gold-plating is the act of adding features that do not add value or that add value but are not part of the scope definition. An appropriate analogy might be purchasing a designer dress when an off-the-rack dress will serve the same



**Figure 1.14** Requirements and design iteration

purpose. The BA must ensure that scope is clearly defined and a change control process is in place to combat this risk.

- *Minimal specification*: as discussed previously in the Business Analysis Perspectives section of this chapter, the business analysis information specification level and timing will vary greatly. It is key that all stakeholders are aware of and agree with the specification level and timing. Without enough information, the solution team's work will likely be stalled or require rework.
- *Overlooked user groups*: the BA ensures that thorough stakeholder analysis is performed. When user groups are overlooked, the following are likely missed:
  - *Interfaces*: must discover these early due to impact on scope
  - *Requirements*: these impacted users will have requirements that must be met and will likely impact scope and rework
  - *Design definition considerations*: these impacted users may have special considerations that influence the design and will likely impact scope and rework
  - *Stakeholder engagement opportunities*: these users feel overlooked, hence insignificant to the project; they are not as likely to support the project or the BA on future initiatives
- *Inaccurate planning*: planning for the business analysis effort is a critical step toward ensuring efficient and thorough business analysis is performed. Without this plan, the BA has no ammunition for unrealistic time frames, and typically, this results in incomplete business analysis information being passed on to the solution team. The cost of rework grows exponentially as the solution development moves through the phases of the SDLC.
- *Impact on reputation*: the ability of the BA to elicit, analyze, collaborate, and gain ongoing consensus of the business analysis information is critical to performing business analysis. If this output does not meet the needs of all stakeholders given the consideration of project type, perspective, and SDLC approach, the BA's reputation will likely take a hit. The BA must reinforce with project leaders the importance of business analysis information—the right level at the right time.

## What Is a Project Versus Program Versus Initiative Versus Operation?

PMI defines a project as *a temporary endeavor undertaken to create a unique product, service, or result*. As practitioners, that means a project has a beginning and an end and that it creates something distinctive. Some projects will last longer than others, but if there is not an end, it's possible the practitioner is working on an operation or a program. An operation is oftentimes a transition as the result of a project ending or an ongoing effort to sustain the business. Operations management is running and controlling constant production of products and/or services.

A program is different than a project. A *program* includes projects that are associated, including initiatives and activities that are controlled in a synchronized way to achieve coordinated benefits that are greater than individual benefits. A program can last for a very long time. Consider NASA's space program—it has been in existence since October 1, 1958. While the space program has been around for decades, the projects that support the space program have evolved over this same time. Just like projects, programs can end at an enterprise when they are no longer in support of the vision, mission, and goals of the business. According to the whitepaper by PMI, *Business Analysis: Leading Organizations to Better*

*Outcomes*, business analysis professionals spend roughly 73% of their efforts working and applying business analysis to projects and programs. This increases to 83% for business analysis professionals who are working in highly mature organizations. The remaining time that business analysis professionals have available is spent on overhead tasks and activities for projects and programs.

An initiative is defined by the IIBA as *a specific project, program, or action taken to solve some business problem(s) or achieve some specific change objective(s)*. Initiatives can be:

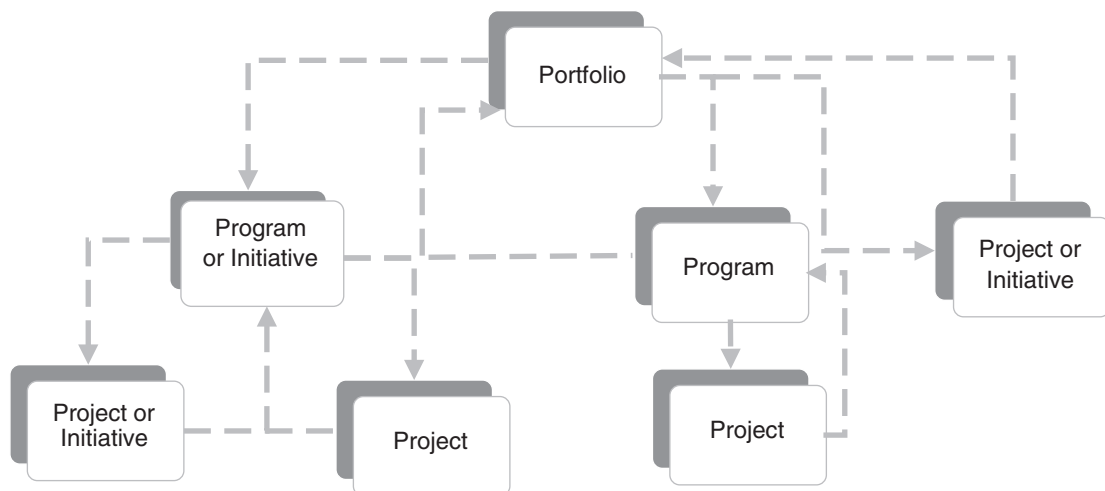
- Strategic
- Tactical
- Operational

This definition reinforces the broadness of the business analysis profession. Multiple perspectives (defined earlier in this chapter) can be used throughout an initiative.

Portfolios are at the top of the hierarchy of these definitions. A portfolio includes projects, programs, subsidiary portfolios, initiatives, and operations. Managing all of these elements within a portfolio helps an enterprise to accomplish its strategic goals and objectives. Figure 1.15 is designed to show the interactions between portfolios, programs, initiatives, and projects.

As shown in these definitions, not every request that a BA receives is a project and not all business analysis endeavors are equal. First, the BA needs to determine whether the request is for a project, program, initiative, or operation. Next, the BA needs to consider the factors contained in this book to determine how to best approach the business analysis effort.

Going forward, the term *initiative* will refer to any portfolio, program, initiative, or project worked on by the BA. In cases that specific types of initiatives should be referenced, that specific type will be identified.



**Figure 1.15** Portfolio, program, initiative, and project interactions

## What Is a System *Versus* a Solution *Versus* a Process *Versus* an Application *Versus* a Software System?

The terms system, solution, process, and application are generally used in business interchangeably. But, there are times that the differentiation allows for more concise discussion; hence, in this text and according to other experts, here are the definitions.

Systems are at play in all aspects of our lives. A *system* is simply a set of components (manual, automated, or a combination of both) that work together to accomplish a goal. An example of a system is paying bills. Individuals, as well as organizations, need a system to pay their bills. The enterprise environmental factors that are described later in this section determine many of the characteristics of a system.

Now there may be many solutions for a system, and typically a change initiative will provide a new solution for a system. *Solution* is defined as a specific way of satisfying one or more needs in a context. It is not very often that the BA is assigned a project that is an entirely new functionality. But thinking back to the example of paying bills, the system has certainly evolved over the years to provide many solutions for doing so:

- Bartering goods
- Paying with cash
- Writing a check and delivering to the vendor
- Vendor initiated draft from financial institution
- Online bill pay
- Wire transfers

All of these represent different solutions that could be part of a system that is used to pay bills.

A *process* is most similar in definition to a system; however, a system may be made up of many processes in order to accomplish the desired outcome. A process is defined as a set of activities that are designed to accomplish a specific objective by taking one or more defined inputs and turning them into defined outputs. Typically, stakeholders will talk in terms of process when manual steps are involved, but discuss the system when there are automated components involved. Within the business analysis perspective of BPM, we will use the term *process*.

An *application* is a software program that runs on your computer. Web browsers, e-mail programs, word processors, games, and utilities are all applications. The word application is used because each program has a specific application for the user. For example, a word processor can help an author write a book, while a video game can prevent that author from getting the book completed.

On the other hand, a *software system* consists of programs that run in the background, enabling applications to run. These programs include assemblers, compilers, file management tools, and the operating system itself. Applications are said to run on top of the system software, since the system software is made of *low-level* programs.

## What Are Stakeholders *Versus* Actors *Versus* Users?

These terms are also used interchangeably, but as the BA, there are important differences to note.

A *stakeholder* is a group or individual with a relationship to the change, the need, or the solution. A stakeholder is any person, group, or organization that may impact, be impacted by, or perceive itself to

be impacted by a project, program, initiative, operation, or portfolio. The biggest risks to the business analysis effort revolve around stakeholders—which could be missed stakeholders or lack of stakeholder involvement. The first step in mastering business analysis is understanding your stakeholders, which will be elaborated on in the upcoming chapter, including stakeholder categorization.

An *actor* is a person, device, or system that fulfills a specific role in interacting with a solution. So, when applying this definition in combination with the definition of a stakeholder, a human actor always has a relationship to the change; hence, there is always a stakeholder. Even though the non-human actor is not a stakeholder, it is likely that the BA will identify an owner of that non-human actor and uncover a stakeholder that otherwise could have been overlooked.

A *user* or *end user* is defined as a stakeholder who interacts with the system and will use the product. With this definition, a human actor is a user—making all users stakeholders. Some texts will differentiate between the user and end user. The end user is considered to be the person for whom the solution was ultimately created and the user is the community that is required to maintain the solution. Examples include:

- End user:
  - Internal business worker who is a payroll processor for the payroll system
  - Retail customer who will purchase products online
  - Automobile assembler to install dashboards
- User:
  - System administrator
  - Database administrator
  - Operational support

The complexion of the end user has undergone many changes in the last few decades. Consider this short summary end user evolution:

- 1950s: end users did not interact with the mainframe; computer experts programmed and ran the mainframe.
- 1960s–1970s: end users were generally programming experts and computer scientists.
- 1980s–1990s: the general public began using computer devices and software for personal and work use. Some of these end users had high technical expertise and some did not. The challenge to develop solutions to meet the needs of the technically savvy users while saving the low technical expertise users from themselves presented some difficulties. This required some user-centric considerations.
- 2000s: user-centric design considerations became mainstream.
- 2010s: users now want to have more control over the systems they operate so they solve their own problems and want to be able to change, customize, and tweak the systems to suit their needs. The drawback would be the risk of corruption of the systems and data that the user has control of due to his/her lack of knowledge as to how to properly operate the computer or software at an advanced level.

BAs and solution providers are challenged to consider a good end user experience, while ever-increasing high levels of security are required.

## What Are Enterprise Environmental Factors *Versus* Organizational Process Assets?

An enterprise environmental factor (EEF) includes conditions that the BA does not have control over. EEFs influence, constrain, and direct the initiative. An EEF can be external or internal to an organization and serves as a necessary input to all business analysis activities. An organizational process asset (OPA) includes plans, processes, policies, procedures, and knowledge bases that are specific to an organization. An OPA is internal to the enterprise and serves as a necessary input to all business analysis activities. To perform effective business analysis work, you need both EEFs and OPAs (see Table 1.13).

**Table 1.13** EEFs and OPAs

External EEFs	Internal EEFs	Process, Policy, and Procedural OPAs	Corporate Knowledge Base OPAs
Academics	Architecture and infrastructure	Change control processes	Business knowledge repositories and sources
Commercialism	Employee competence	Financial controls processes	Configuration management knowledge repositories
Business analysis professional standards	Geography for facilities and resources	Guidelines and criteria	Data repositories for metrics
Finances	Human resources management policies and procedures	Issue and defect management processes	Historical information and lessons learned knowledge repositories
Government or industry standards	Information technology	Organizational communication requirements for business analysis processes	Issue and defect management data repositories
Legal and contracts	Business analysis results reuse and interest	Processes, policies, or procedures	<b>Team and SME Knowledge OPAs</b>
Marketplace	Market research and testing	Project closeout guidelines or requirements	Future state needs and expectations
Physical environment	Organizational culture, structure, and governance	Project life cycles and methodologies	Information and knowledge
Social and cultural influences	Other resource policies, procedures, and availability	Requirements management tool processes	Insights and perceptions
Social and cultural issues	Security policies, procedures, and rules	Risk management templates	Product knowledge and information
Stakeholder expectations and risk appetite	Stakeholder expectations and risk appetite	Specific organizational standards and policies	
		Standardized guidelines	
		Templates	

Adapted from *The PMI Guide to Business Analysis*



## BUSINESS ANALYSIS CENTER OF EXCELLENCE AND BUSINESS ANALYSIS COMMUNITY OF PRACTICE

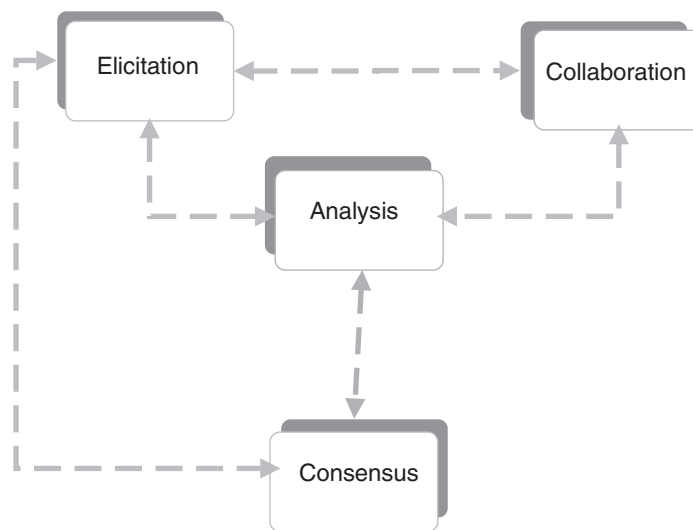
A Business Analysis Center of Excellence (BACOE) includes a team of employees or group of people who join together to collaborate and create best practices to use for business analysis work. Business Analysis Forum or Center of Business Analysis Practice are additional names that are preferred by some organizations. Creation of a BACOE is a strategic advantage for enterprises who want to mature, continuously improve, and create consistencies within their business analysis efforts. The BACOE can also benefit organizations that want to provide career development, lunch and learns, mentoring, and growth opportunities for BAs by being centrally managed. A BACOE primarily focuses on business analysis and is an organizational process asset.

A Business Analysis Community of Practice (BA CoP) includes practitioners who create shared practices and is also an organizational process asset. A Business Analysis Competency Center is an additional name that is preferred by some organizations. A BA CoP starts with a champion and core group, then extends to other stakeholders, which is different than a BACOE. A BA CoP is also concerned with maturing, continuously improving, identifying specific processes, using specific OPAs, conformance, and creating consistencies within the entire project community—including all stakeholders. Support from the entire project community could include a PMO and/or enterprise PMOs.

The BACOE or BA CoP can provide you with an excellent opportunity to network, learn from other BAs, and help you with career development.

## HONE YOUR BUSINESS ANALYSIS INFORMATION ELABORATION TECHNIQUES

The BA should be equipped with techniques to manage business analysis information. As depicted in Figure 1.16, the cycle for elaborating business analysis information is an iterative process. As business analysis information is acquired, the BA is seeking collaboration on the information. With that collaboration, more questions surface and more information is elicited. As the business analysis information gained is analyzed, the BA is looking for validity, corroboration, efficiencies, existing patterns, gaps, and conflicts. However, this analysis is likely to require further collaboration and elicitation—at some point, driving to stakeholder consensus. This consensus may require iteration back through the elicitation, collaboration, and analysis. The techniques the BA employs for each of these aspects may vary based on many factors such as business analysis perspective, stakeholder preferences, the specific point in the life cycle of the initiative, or project type; but these aspects will be required of any business analysis effort. Table 1.14 provides a map of commonly used techniques, as referenced by the IIBA and PMI for business analysis efforts. Table 1.14 is not intended to dictate use of the techniques, but rather to provide guidance as needed. Business analysis perspectives are indicated on the table. You will notice that some techniques are not referenced in a particular perspective—however, given the BA's own expert judgment, one should not feel prohibited from using the table. As this book elaborates the steps to mastering business analysis in the following chapters, more detail will be provided on how to perform the steps and build on these techniques.



**Figure 1.16** Elaborating business analysis information

**Table 1.14** Techniques generally used in these contexts

Techniques	Mastering Business Analysis Standard Practices: Seven Steps to Achieving the Next Level of Competency							Aspects of Elaborating Business Analysis Information				Business Analysis Perspectives				
	1. Understand Your Stakeholders	2. Understand the Business Context	3. Plan the Business Analysis Work	4. Set Initiative Scope	5. Develop Solution Requirements and Design Definition	6. Manage Scope	7. Evaluate the Solution	Elicitation	Collaboration	Analysis	Consensus	Business Intelligence	Business Process Management	Business Architecture	Information Technology	Agile
Acceptance and Evaluation Criteria				X	X	X	X	X	X	X	X	X	X	X	X	X
Backlog Management					X	X		X	X	X	X	X	X	X	X	X
Balanced Scorecard		X		X			X	X	X	X	X	X	X	X		
Benchmarking and Market Analysis		X		X			X	X		X		X	X	X		
Brainstorming			X	X	X		X	X	X	X		X	X	X	X	X
Business Capability Analysis	X	X		X						X	X		X	X	X	X
Business Cases		X		X		X	X	X	X	X	X					
Business Model Canvas	X	X		X						X	X			X		

Continued

Techniques	<i>Mastering Business Analysis Standard Practices: Seven Steps to Achieving the Next Level of Competency</i>							Aspects of Elaborating Business Analysis Information				Business Analysis Perspectives				
	1. Understand Your Stakeholders	2. Understand the Business Context	3. Plan the Business Analysis Work	4. Set Initiative Scope	5. Develop Solution Requirements and Design Definition	6. Manage Scope	7. Evaluate the Solution	Elicitation	Collaboration	Analysis	Consensus	Business Intelligence	Business Process Management	Business Architecture	Information Technology	Agile
Business Motivation Model (BMM)	X	X		X		X				X	X			X		
Business Process Architecture		X		X		X				X	X		X			
Business Rules Analysis	X	X			X			X	X	X	X	X	X	X	X	X
Business Value Definition		X		X		X	X	X	X	X	X					
Change Control Boards (CCB)						X					X					
Collaborative Games	X	X		X				X	X					X	X	X
Concept Modeling				X	X			X	X	X						X
Customer Journey Map	X			X	X			X	X	X	X			X		
Data Dictionary					X					X		X		X	X	
Data Flow Diagrams					X					X		X		X	X	
Data Mining					X		X	X		X						
Data Modeling		X		X	X			X	X	X	X	X	X	X	X	
Decision Analysis		X		X	X	X	X	X	X	X		X	X	X	X	
Definition of Doneness							X	X	X		X					X
Document Analysis	X	X	X	X	X	X	X	X		X		X	X	X	X	
Estimation		X	X	X		X	X	X	X	X	X	X	X	X	X	X
Failure Mode and Effect Analysis (FMEA)					X	X	X			X			X			
Financial Analysis/Valuation Techniques		X	X	X	X	X	X			X						
Focus Groups				X	X		X	X		X		X	X	X	X	
Functional Decomposition	X	X	X	X		X				X		X	X	X	X	X
Gap Analysis		X		X	X		X	X	X	X						
Glossary		X		X	X					X		X		X	X	
House of Quality/Voice of Customer	X	X		X		X	X	X	X	X	X		X			
Impact Analysis						X				X						

Continued

Techniques	Mastering Business Analysis Standard Practices: Seven Steps to Achieving the Next Level of Competency							Aspects of Elaborating Business Analysis Information				Business Analysis Perspectives				
	1. Understand Your Stakeholders	2. Understand the Business Context	3. Plan the Business Analysis Work	4. Set Initiative Scope	5. Develop Solution Requirements and Design Definition	6. Manage Scope	7. Evaluate the Solution	Elicitation	Collaboration	Analysis	Consensus	Business Intelligence	Business Process Management	Business Architecture	Information Technology	Agile
Input, Guide, Output, Enablers (IGOE)				X						X	X		X			
Interface Analysis				X	X	X		X		X		X	X	X	X	X
Interviews	X	X	X	X	X	X	X	X				X	X	X	X	
Item Tracking			X	X	X	X	X			X	X	X	X	X	X	
Kaizen Event				X	X	X	X	X	X	X	X		X			
Kano Analysis	X	X		X		X		X	X	X	X					X
Lessons Learned (Retrospectives)	X	X	X				X						X	X		X
Lightweight Documentation					X					X						X
Metrics and Key Performance Indicators (KPIs)		X	X	X	X	X	X			X	X	X	X	X	X	X
Mind Mapping	X		X	X	X			X	X	X						X
Nonfunctional Requirement Analysis				X	X		X			X		X	X	X	X	X
Observation	X				X		X	X	X			X	X	X	X	
Organizational Modeling	X	X		X	X		X			X		X	X	X	X	
Prioritization				X		X	X			X	X	X	X		X	X
Process Analysis	X	X		X	X		X	X	X	X	X		X	X	X	X
Process Modeling	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
Product Portfolio Matrix		X		X		X	X	X	X	X	X		X	X	X	
Project Portfolio Analysis		X	X	X	X	X				X				X		
Prototyping				X	X		X	X	X	X	X	X	X	X	X	X
Purpose Alignment Model		X		X		X				X	X					X
Real Options					X	X	X				X					X
Relative Estimation				X			X									
Requirements Configuration Management System (RCMS) and Version Control System (VCS)					X	X			X	X	X					

Continued

Techniques	<i>Mastering Business Analysis Standard Practices: Seven Steps to Achieving the Next Level of Competency</i>							Aspects of Elaborating Business Analysis Information				Business Analysis Perspectives				
	1. Understand Your Stakeholders	2. Understand the Business Context	3. Plan the Business Analysis Work	4. Set Initiative Scope	5. Develop Solution Requirements and Design Definition	6. Manage Scope	7. Evaluate the Solution	Elicitation	Collaboration	Analysis	Consensus	Business Intelligence	Business Process Management	Business Architecture	Information Technology	Agile
Reviews						X			X		X	X	X	X	X	X
Risk Analysis and Management	X	X	X	X	X	X	X			X	X	X	X	X	X	
Roadmap		X				X										
Roles and Permissions Matrix				X	X		X			X	X	X		X	X	
Root Cause Analysis		X		X	X	X	X	X	X	X		X	X	X		
Scope Modeling		X		X						X	X	X	X	X	X	X
Sequence Diagrams					X		X			X		X			X	
Specification by Example					X		X	X	X	X	X					X
Stakeholder List, Map, or Personas	X	X		X	X	X		X	X	X	X	X	X	X	X	X
State Modeling				X	X					X		X		X	X	
Story Elaboration					X			X	X	X						X
Survey or Questionnaire	X	X		X	X		X	X		X		X	X	X	X	
SWOT Analysis		X		X			X			X		X		X	X	
Theory of Constraints (TOC) Thinking Processes				X	X		X	X	X	X			X			
Traceability Matrix					X	X	X			X						
Use Cases and Scenarios					X		X			X		X	X	X	X	X
User Stories					X					X		X	X	X	X	X
Vendor Assessment				X	X		X			X	X	X		X	X	
Workshops				X	X	X	X	X	X	X	X	X	X	X	X	X

Legend:

**X** = The appropriate time to use the technique for the steps, elaborating business analysis information, and perspectives

**X** = The step in the book where the technique is explained

## BUSINESS ANALYSIS JOURNEY MAP

The business analysis journey is an iterative process; hence a simple process model fails to do the job. Instead, Figure 1.17 provides a business analysis map to guide you through the steps on the journey. We suggest using this as a reference for any business analysis perspective and to vary the techniques that you employ based on the initiative factors that you are presented.

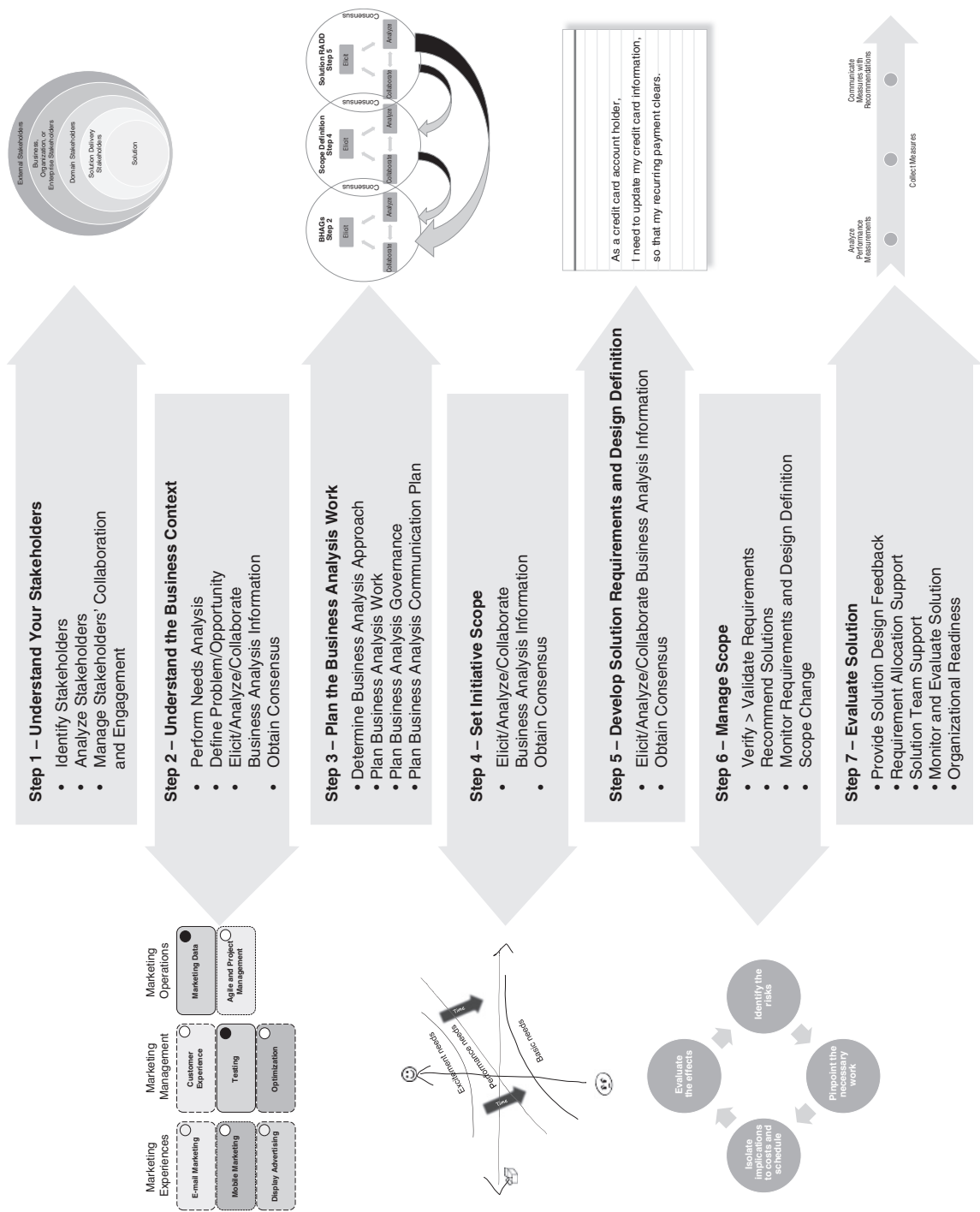


Figure 1.17 Business analysis journey map

## SUMMARY OF KEY POINTS

Working as a BA is not just a job that we go to each day, but rather a profession that is supported by specific tools, techniques, and processes that help organizations meet their goals. The BA may choose a generalized path or specialize in business analysis perspectives. We identified the five most common perspectives, but know that as the business analysis space evolves in our ever-changing world, there will be additional depths of these perspectives defined and new perspectives added. This chapter provided insights into key terms that will be used going forward in subsequent chapters as we proceed through the steps to mastering business analysis.

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